VOL. 74 NO. 4

textile bulletin

APRIL • 1948

Four timely articles, dealing with numerous aspects of personnel work and training, are published in this issue. They begin on Page 37.

MA[illegible] 1948

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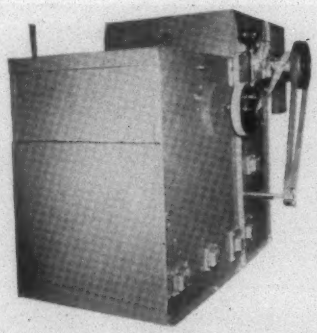


THE WHITEHEAD NO. 1

BLENDING

FEEDER

Machine is made of 10 gauge steel, power cut and welded, is smaller than any other machine of similar production capacity, equipped with fully enclosed self-aligning "Oilite" bearings.

Slip type removable inspection plates permit easy cleanout of waste from around shafting and between aprons.

Full Particulars On Request

TEXTILE EQUIPMENT

Aprons and Special Conveyors

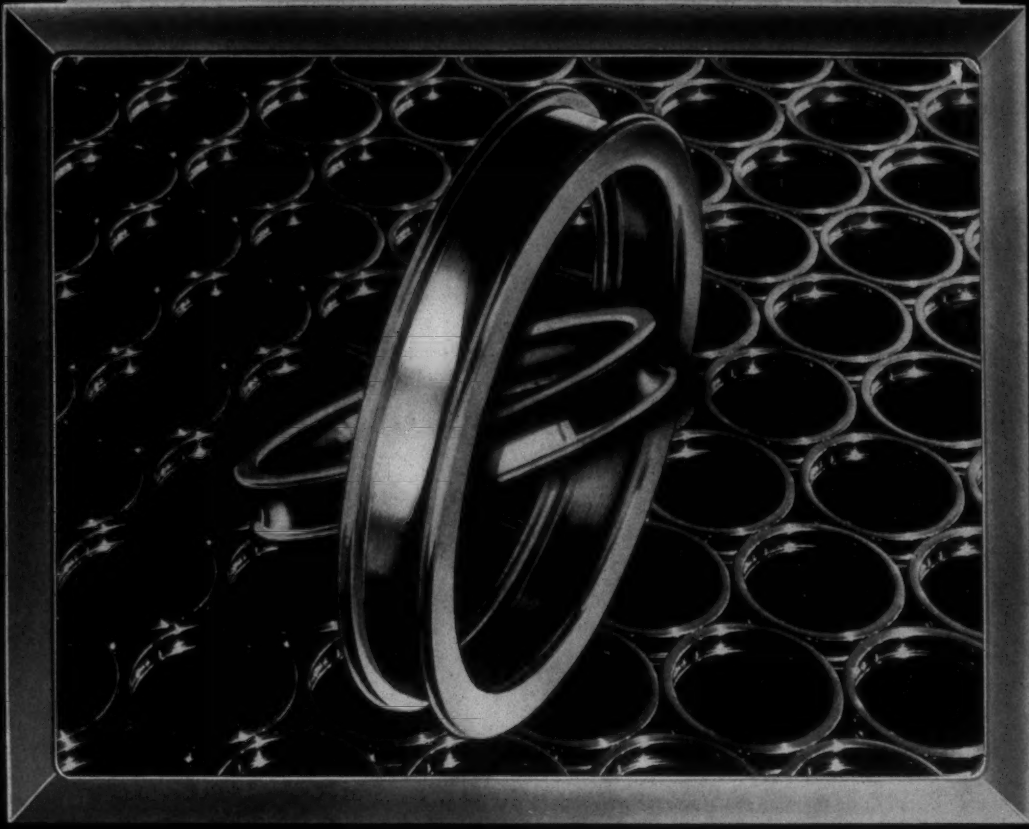
TROY WHITEHEAD MACHINERY CO. Inc.

Complete Engineering Service

Phone 3-9831

P.O. Box 1245

CHARLOTTE, N. C.



Waiting to replace those worn out rings?
Why wait?

Improved manufacturing methods have enabled us to step up production. We can now deliver rings 10 weeks from receipt of complete specifications. Draper rings have proven themselves. Draper rings with mirror finish are made of steel furnished to our special analysis. They have set the standard for roundness, hardness, durability over a period of 80 years.

For
- lower traveler maintenance cost
- properly spun packages
- fewer ends down
- longer ring life

Order Draper rings now. Get 10 weeks delivery.

DRAPER CORPORATION

TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead Street, Charlotte 2, N. C. Subscription $1.50 per year in advance, $3 for three years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

One Word Can Make A Lot of Difference in Factoring!

FACTORING

More and more, the word "COMMERCIAL" is recognized as the "distinguishing mark" in factoring. It is the symbol of long experience, complete facilities and resources, and a knowledge of every branch of the textile industry.

We will gladly explain in detail what *COMMERCIAL FACTORING* can mean to your business in new opportunities and increased profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Vietor & Achelis, Inc. Established 1828	Schefer, Schramm & Vogel Established 1838	Peierls, Buhler & Co., Inc. Established 1893

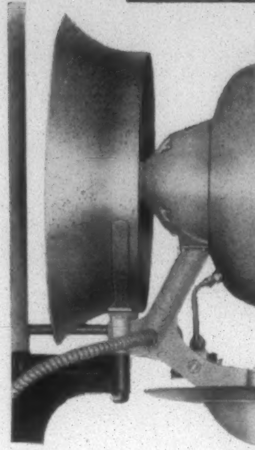
TWO PARK AVENUE, NEW YORK

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

CFC

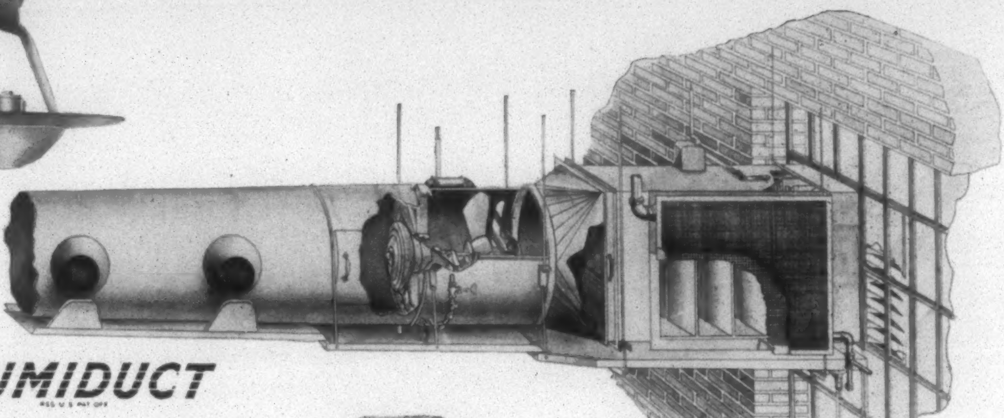
INDUSTRIAL AIR CONDITIONING

DESIGNED • ENGINEERED • MANUFACTURED • INSTALLED • SERVICED by Bahnson



Centrifugal Humidifier

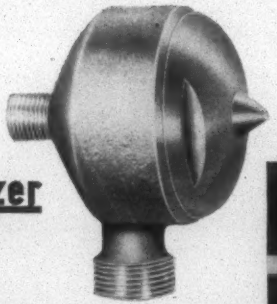
A self-contained unit offering high evaporative capacity plus directional air flow at low operating cost—for single or multiple installation with individual or master control. Simple installation requires water line, drain and electric current.



HUMIDUCT

REG. U. S. PAT. OFF.

A self-contained unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering and dehumidifying—available in any desired combination.

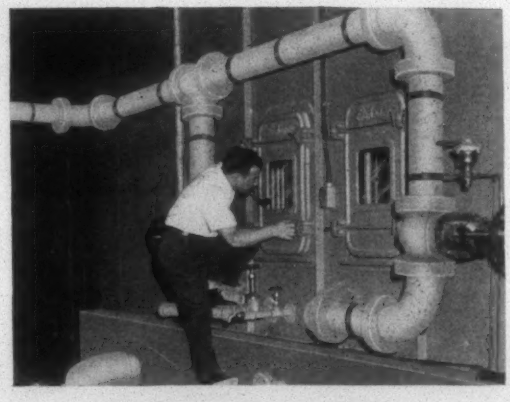


Economizer

A self-cleaning pneumatic atomizer, interchangeable with standard aspirating types, offering notable savings in compressed air when operating at similar air pressure, rate of evaporation, and spray quality.

THE BAHNSON COMPANY has specialized for 33 years in the design, engineering, manufacture, installation and service of industrial Air Conditioning Equipment—tailored for the specific requirements of varied needs in the Textile Industry.

Write for Bulletin No. 333



Air Washer Systems

Bahnson installations range in size from small laboratory units to systems handling 1000 tons of refrigeration and Bahnson air washers handling 275,000 c. f. m.

Bahnson System

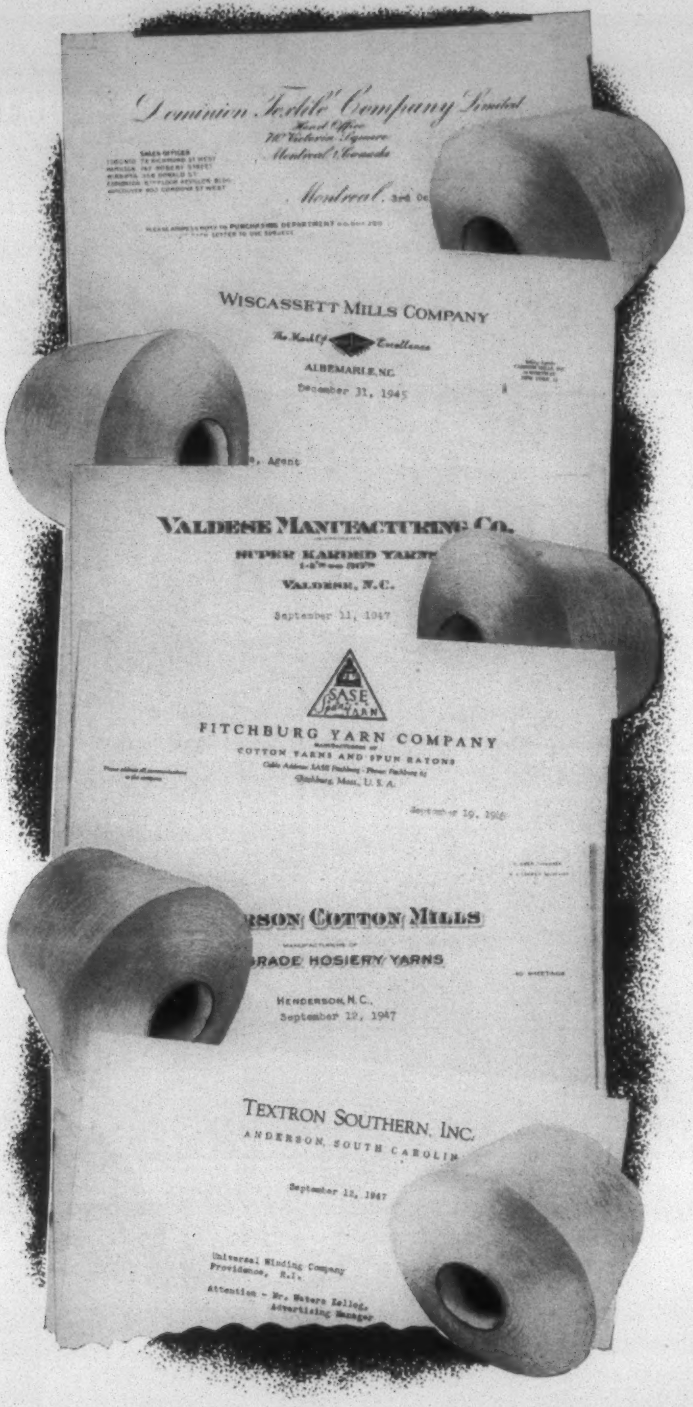
POSITIVE CIRCULATION • LOWER OPERATING COST

AIR CONDITIONING ENGINEERS

THE BAHNSON CO WINSTON-SALEM, N. C.

886 Drewry St., Atlanta, Ga. 93 Worth St., New York City 703 Embree Crescent, Westfield, N. J. 553 S. Figueroa St., Los Angeles, Cal.

W. J. Westaway Co., Ltd., Hamilton, Ontario A-3 Virginian Apts., Greenville, S. C.



THE "WHO'S WHO" IN COTTON SPINNING KNOW "WHAT'S WHAT" IN CONE WINDING

Your cue to the latest practice in cone winding is the fact that more mills are replacing old equipment with Roto-Coners* than with any other make.

Mills like those represented here — always in the forefront of technical progress — are fast standardizing on the modern winding machine with the exclusive Rotary Traverse.

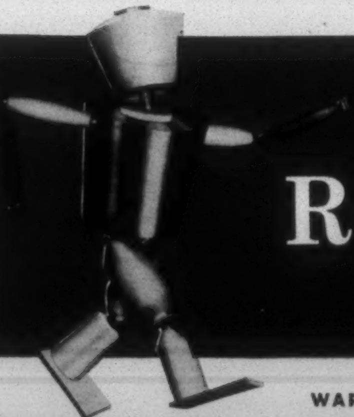
They are winding at higher speeds (up to 550 ypm), paying less for maintenance (under ½ of 1% on investment per year), improving working conditions (machine is quiet, clean, easy to operate), producing better quality cones (uniform, free from roll-cuts and underwinds, accurately inspected).

On both counts — cost and quality — the Roto-Coner* has become the No. 1 machine for open-wind knitting cones.

UNIVERSAL WINDING COMPANY

Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England, Paris, France; Basle, Switzerland.

Agents in every principal textile center in the world.



LEESONA

ROTO-CONER*

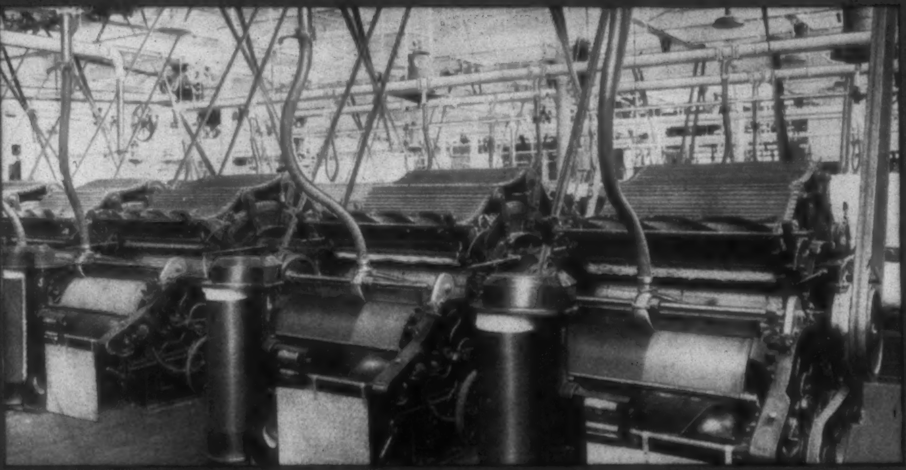
Cones for Knitting

WARPING CONES — DYEING PACKAGES — PARALLEL TUBES FOR TWISTING

We make our card stripping PAY DIVIDENDS — 4% greater production per card

ABINGTON

VACUUM CARD STRIPPING SYSTEM



Here is a card room in which 554 cards are equipped with the Abington Vacuum Stripper. This system automatically strips cylinder and doffer in one operation. One man can strip 675 cards per 8-hr. shift. In addition, Waste Stations are provided which collect flat strips, comber noil and other process waste, all waste and strips being delivered by vacuum piping to a central waste house, which may be located within or outside the main mill.

In hundreds of mills, results like these---

***Request:* "COTTON STRIPPER CATALOG"**

Nearly 900 mills have turned a nuisance operation into an advantage, obtaining greater production, improved quality and lower costs, as follows:

1. Production increased 4% or more because of less down time for stripping.
2. Direct stripping cost reduced 60% to 90%.
3. Stripping 100% by vacuum (no brush touches the clothing) keeps card wires in better condition with less frequent grinding.
4. Extra thorough stripping gives cleaner silver, less fly, better quality of product. 100% dust free.

One mill states: "One man alone strips 225 cards 3 times daily." Another says: "We only have to grind 2/3 as often to keep wires in good condition."

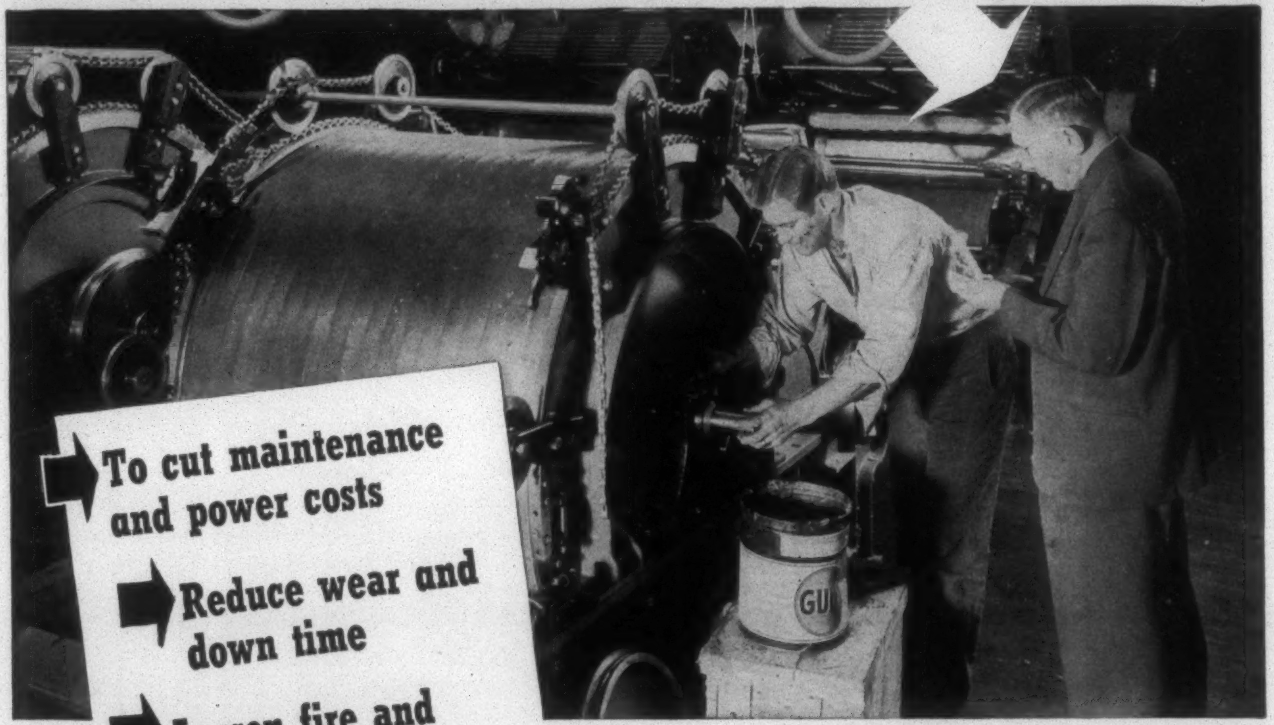
Write NOW for full information

ABINGTON TEXTILE MCHY. WKS. VACUUM CARD STRIPPERS
YARN DYEING SYSTEMS • WEAVER'S KNOTTERS

FRED H. WHITE, Gen. Mgr.
Home office: 19 Congress St., Boston, Mass.   Southern office: Johnston Bldg., Charlotte, N. C.

Let a GULF Lubrication Engineer

WORK WITH YOU— FOR YOU—



- To cut maintenance and power costs
- Reduce wear and down time
- Lessen fire and accident hazard
- Eliminate spotting and oily cuts

The Gulf Lubrication Engineer "in the picture" is checking lubrication of a new card in a large southern mill.

YOU GET THE FULL BENEFIT of lubricants as engineering materials when you use Gulf quality oils and greases as recommended by a Gulf Lubrication Engineer.

This lubrication expert is familiar with those operating conditions which affect the efficiency of your lubrication—thus he can quickly diagnose trouble, discover ways and means to increase production and reduce maintenance costs through the proper application of the right Gulf lubricants.

Avail yourself of this helpful engineering service when you install new equipment, when you make improvements to existing equipment, when your maintenance and power costs are high and when you encounter hard-to-solve lubrication problems.

Write, wire, or phone your nearest Gulf office today and ask a Gulf Lubrication Engineer to call.

Gulf Oil Corporation · Gulf Refining Company

Division Sales Offices:

Boston • New York • Philadelphia • Pittsburgh • Atlanta
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GULF INDUSTRIAL LUBRICATION

Barreled Sunlight
REG. U.S. PAT. OFF.
OUTSIDE

Barreled Sunlight

Outside White

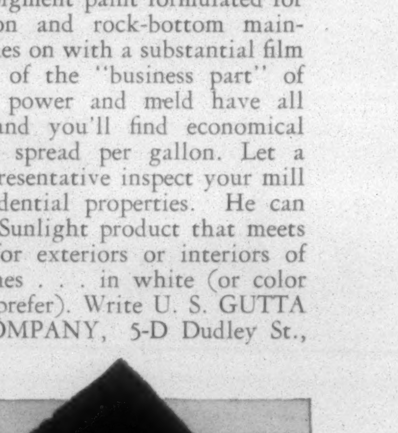
The Self-Cleaning Paint that Cuts Maintenance Costs and Stays White Permanently!

We discontinued making BARRELED SUNLIGHT OUTSIDE WHITE when top quality raw materials couldn't be bought, begged or borrowed! But now it's back again — better than ever, the money-saving paint that cuts costs because it spreads farther, flows easier, *stays white for paint life*. It's brilliantly white when you put it on. It becomes whiter and brighter with time because of "controlled chalking" . . . the slow, even, self-cleaning process that keeps the surface always smooth and easily repainted with a minimum of preparation—thus saving time and labor.

This important member of the Barreled Sunlight family is a multiple pigment paint formulated for long-lasting protection and rock-bottom maintenance costs. It brushes on with a substantial film — gives you MORE of the "business part" of paint. Flow, hiding power and meld have all been stepped up — and you'll find economical yardage in its wide spread per gallon. Let a Barreled Sunlight representative inspect your mill village or other residential properties. He can suggest the Barreled Sunlight product that meets your needs exactly for exteriors or interiors of company owned homes . . . in white (or color combinations if you prefer). Write U. S. GUTTA PERCHA PAINT COMPANY, 5-D Dudley St., Providence, R. I.

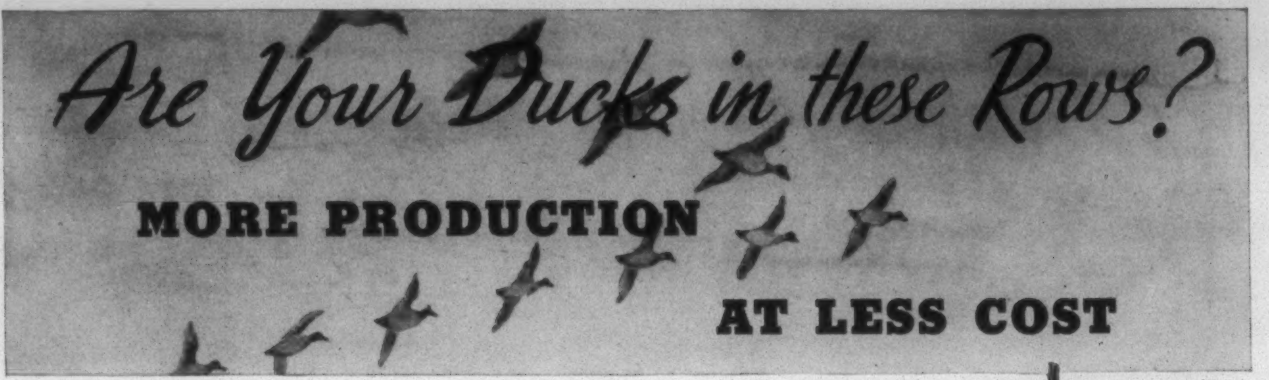
In the Mill, Barreled Sunlight *throws light* on Lower Costs!

Lighting costs go *down*, worker efficiency *up* when you paint mill ceilings and walls with BARRELED SUNLIGHT WHITE. Experts report important power savings and production savings of 10% or more. Barreled Sunlight, whitest of white paints, stays white longer . . . hides better . . . spreads farther . . . flows easier.



BARRELED SUNLIGHT *Paints*

In whitest white or clean, clear, pleasing colors, there's a BARRELED SUNLIGHT Paint for every job



Here's how you can get lined up to meet present day requirements of volume textile production.

With the help of one of the South's oldest and most experienced sheet metal plants you can gear your preparatory machinery to modern competition. You can insure uninterupted production right from the start with precision made sheet metal parts. You can rely on quality products made and delivered with prompt dependable service. You can realize substantial savings.

Simply write, wire or phone

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA

A SHEET METAL WORKS SERVING TEXTILE MILLS

AHCOWET* ANS AND AHCOWET* RS

Here are two blue-ribbon surface-active agents which, together, satisfy all your wetting and rewetting requirements.

AHCOWET* ANS

Newly improved — highly effective in acid and alkaline solutions — clear, amber color — resists inorganic salts.

AHCOWET* RS

Newly improved — highly effective in acid and neutral solutions — clear, golden color — resists inorganic salts — ideal for rewetting.

Samples and further data on request

*Trademark Registered

ARNOLD, HOFFMAN & CO. INCORPORATED

MANUFACTURING CHEMISTS

ESTABLISHED 1815 • PLANTS AT DIGHTON, MASS. AND CHARLOTTE, N. C.

PROVIDENCE, RHODE ISLAND

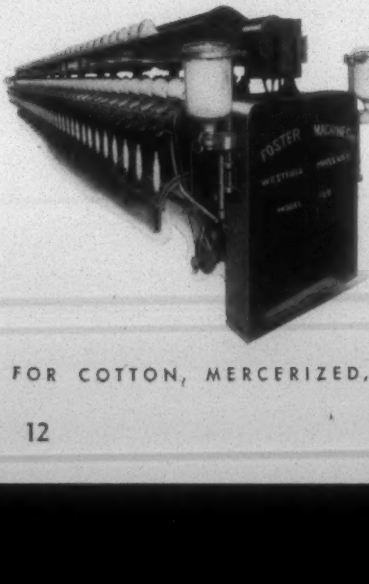
NEW YORK • BOSTON • PHILADELPHIA • CHARLOTTE

throw away that crystal ball

Despite the uncertainties of the next few years, one fact is admitted in the textile industry. Profits must come from savings; further markups are dangerous. And no textile man needs a crystal ball to see how to effect these savings. In winders particularly, the means are evident. *Greater production* of a *better product* at *less cost* can be more or less achieved by any modern winder. But that alone is not enough. Winding equipment must also be FLEXIBLE,—adaptable to changing fibre and yarn requirements, for change is the order of the day. The Foster Model 102 is the ONLY winder of its type which offers maximum flexibility in addition to the other modern requirements.

HERE'S THE STORY:—

FLEXIBILITY -	Will handle any count or type staple yarn with same traverse mechanism—any angle of wind from 9° to 18°—any ordinary taper. Can be equipped to wind knitting cones, warper cones, dye packages, tubes or short traverse cheeses, one type on each side of the machine if desired.
INCREASED PRODUCTION -	Doubles production over obsolete models because of high winding speeds (up to 700 y.p.m.) and labor saving devices mentioned under "ECONOMY". 7″ traverse packages instead of standard 6″, if desired.
ECONOMY -	Reduces operating costs ⅓ under obsolete models because of self threading tension devices, easy doffing, 7″ traverse package, if desired, and empty bobbin conveyors which empty into standard sized trucks. Repair costs as low as $3.50 per year per 100 spindle machine.
QUALITY PRODUCT -	Automatic inspection. Conditioned yarn. Convex base prevents underwinding and nipping. Ribbon breaker prevents ribbon wind. Uniform density and properly shaped cones. Minimum tension on soft twist yarns prevents excessive breakage.



Send for Bulletin A-95 for complete data.

FOSTER MACHINE CO.

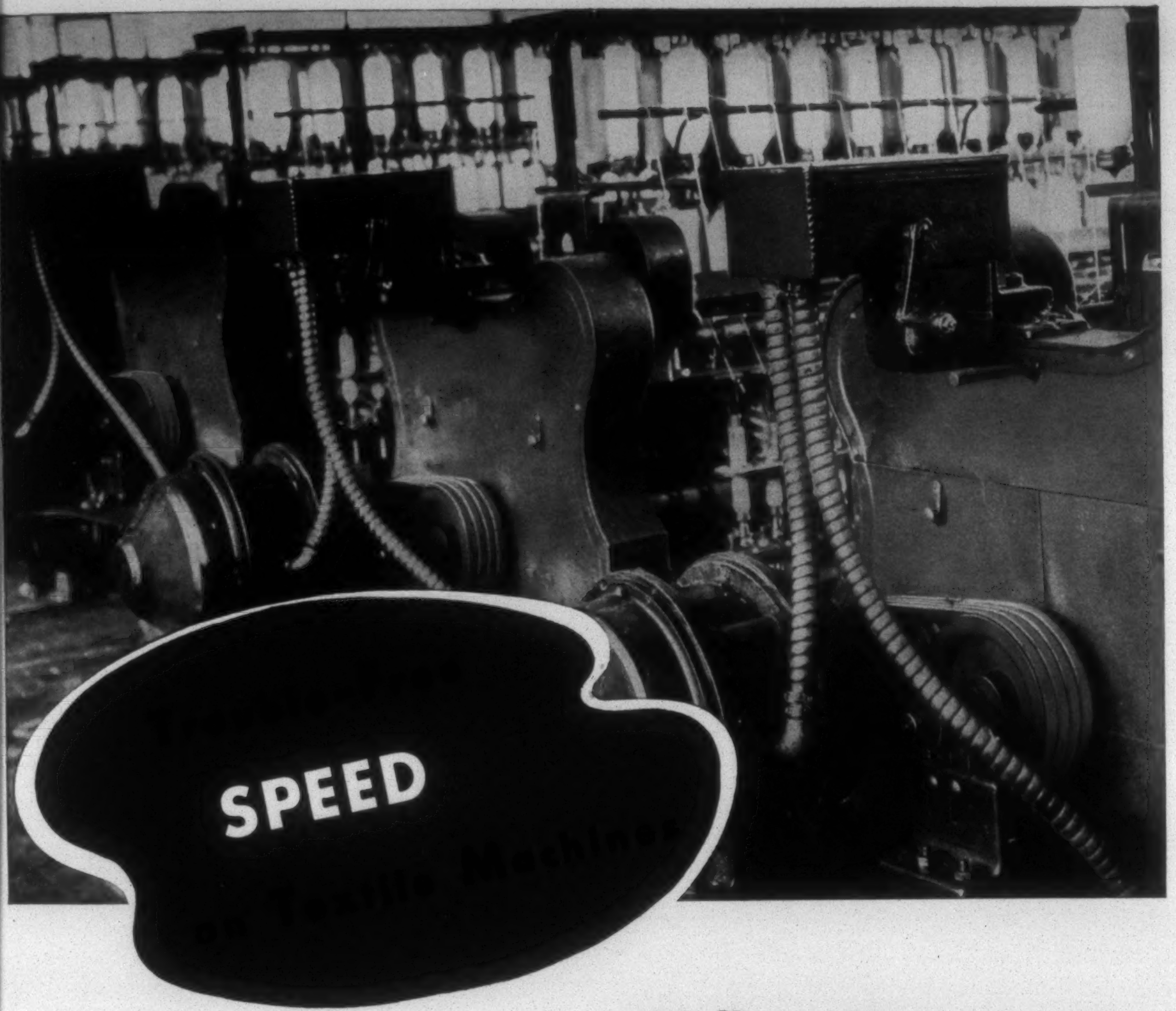
Westfield, Mass., U.S.A.

Southern Office: Johnston Bldg., Charlotte, North Carolina; Canadian Representative: Ross-Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine Street, West, Montreal, Quebec; European Representative: Muschamp Taylor Ltd., Manchester, England.

FOSTER MODEL 102

The Flexible Winder

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS



. . . with Condor Whipcord V-Belts

Manufacturers of all types of machinery are relying on Manhattan's method of engineering V-belts to meet their requirements for original equipment.

Condor Whipcord V-Belts embody 8 Points of Balance. Their principal advantage lies in the endless-wound Strength Member of strong, pre-stretched Whipcords that ride in a cushion of slow-aging, heat-dissipating Flexlastics. The performance of this construction is satisfactory under all conditions. Condor Whipcord V-Belts have a wide margin of tensile strength and resistance to distortion and wear.

V-Belt Bulletin 6868-B gives more details of this long-wearing construction and includes helpful tables. Ask for your copy.

Manhattan's line of rubber products for the Textile Industry is consistently dependable—outstanding in quality. Make MANHATTAN your choice.

("Flexlastics" is exclusive with Manhattan)

RAYBESTOS MANHATTAN R M

RAYBESTOS-MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION **PASSAIC, NEW JERSEY**

The TUFFERIZING PROCESS—developed and exclusively owned and used by Howard Bros. cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires are formed with precision and placed accurately in the famous Tuffer Foundation . . . when drawn on the cylinder they fit snugly—*sides perfectly parallel and every point in place.*

"Tuffer" Men help you to get Better Quality

Howard Bros. representatives are qualified to help you get the best possible results from your carding equipment. They are men of specialized training and experience who can give valuable assistance in improving quality and increasing efficiency in YOUR card room.

Here's what one large textile unit says: "We appreciate the excellent service your company has given us in the past. Your man came up and worked in our carding department, checked the condition of our card clothing, *doing an excellent job and to our benefit.* It is a pleasure to put our appreciation on the dotted line."

Time and time again we receive similar words from Howard Bros. customers.

Talk over your particular problems with a Howard Bros. representative. There's no obligation on your part. Get in touch with your nearest Howard Bros. plant or office.

HOWARD BROS. MFG. CO.
WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Branches: Philadelphia, Pa., and Blanco, Texas
Direct Representation in Canada

A-8

TUFFER
CARD CLOTHING
IMPROVES PRODUCTION ALL ALONG THE LINE

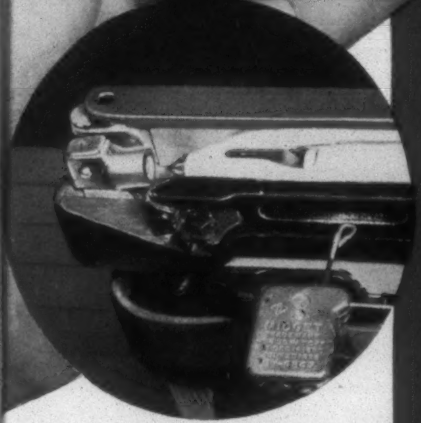
"Have *YOU* tested this amazing new picker?"

STEEL-HIDE

. . . By Graton & Knight Gives You The Performance And Long Life You've Always Wanted.

No other picker combines such long service life with such smooth performance. Look at what STEEL-HIDE can do for you:

- **CUT OPERATING COSTS . . .** because STEEL-HIDE combines longer life with smoother operation. Shock absorption is tremendously improved . . . laminated raw-hide leather nose is accurately drilled to receive shuttle spur. Boxing problems are greatly reduced. STEEL-HIDE is interchangeable right and left hand . . . inventory is cut to a minimum.
- **REDUCE "SECONDS" . . .** rebound controlled . . . no kinky filling . . . because picker maintains true alignment on stick due to patented loop construction: leather cushion on front absorbs shocks — rubber cushion on back insures snug fit — steel lip prevents rocking.
- **INCREASE YARDAGE . . .** because exclusive, steel-and-leather construction gives longer loom service . . . fewer shut-downs. Heavy gauge steel sheath gives extra strength . . . leather gives perfect resiliency.
- **REDUCE MAINTENANCE . . .** because all parts associated with picker action last longer. Stick breakage is reduced . . . shoe wear is minimized.



Loom tests of STEEL-HIDE show that it cuts operating costs, reduces cloth spoilage, increases yardage and reduces maintenance.

STEEL-HIDE . . . its longer life is locked in steel

Designed to fit 1" x 19/32" stick only.

Order a test lot from your nearest Graton & Knight Distributor and find out in your own mill how STEEL-HIDE will perform for you.

LATEST ADDITION TO THE

GRATON AND KNIGHT

ORANGE LINE LOOM LEATHERS

A complete line manufactured by the world's largest manufacturer of industrial leathers

GRATON & KNIGHT COMPANY

328 FRANKLIN STREET, WORCESTER 4, MASSACHUSETTS

A VITAL MESSAGE TO ALL OWNERS OF

PYRENE FIRE EXTINGUISHERS

Some Pyrene* Vaporizing Liquid Pump Type Fire Extinguishers (1-pt., 1-qt., and 1½-qt. sizes only) have gone bad as a result of the liquid in them. We want to get them back. We ask your help in returning them for replacement.

SINCE 1907, Pyrene has been a symbol of quality.

No one has ever found a more effective extinguishing agent for its purpose than the liquid supplied to us for Pyrene Vaporizing Liquid Extinguishers.

But, suddenly, and for no apparent reason, something went wrong with this extinguishing fluid. Some time after they had left our plant a number of extinguishers—despite their having passed exhaustive factory tests—began to corrode, and worked either improperly or not at all.

We had no warning whatsoever that this would happen. We had no way to foresee it.

At the first hint of trouble, our own laboratories and those of our suppliers—as well as outside technical consultants—went on an intensive search for the cause.

Now we know the answer. It lay outside our plant. The cause was traced back to a change in the method of preparing the chemicals used in the extinguisher liquid.

The label on the front of each 1-qt. and 1½-qt. Pyrene Vaporizing Liquid Pump Type Extinguisher bears a serial number. If you own an extinguisher in any of the serial-number groups listed, please return it immediately to your regular source of supply or to us at **Dept. RX, 10 Empire Street, Newark 5, New Jersey.** We will, without charge, replace all such extinguishers as quickly as we can. Since there are no identifying serial numbers on Pyrene 1-pint extinguishers, please also return them for factory testing and replacement if necessary.

Please also return for replacement all Pyrene Fire Extinguisher Liquid Refills purchased by you prior to January 1, 1948, from any source. Such liquid in its original shipping carton should be returned if it bears any P. O. No. from 6701 to 12454. Liquid should be shipped on separate bill of lading to us at **560 Belmont Avenue, Newark 8, N. J.**

EXTINGUISHERS TO BE RETURNED

1½-Quart Extinguishers

150781 to 150900
235486 to 235530
236731 to 237230
403106 to 404730
411998 to 414430
416631 to 419830
419931 to 449230
449631 to 458930
460931 to 461230
461331 to 478330
480481 to 494480
497631 to 504630
505631 to 509630
510256 to 518255
520356 to 520955
532356 to 533748
539856 to 544312

1-Quart Extinguishers

R689558 to R689997
R692644 to R693497
R731288 to R732363
R751698 to R753697
T334485 to T380550
T398671 to T485550
T583051 to T585050
T585551 to T601200
T601801 to T676150
T676251 to T680483
T680651 to T711650
T712151 to T792150
T793151 to T843750
T844550 to T845050
T846551 to T853350
T854051 to T854700
T861051 to T906880
T911051 to T976216
T977051 to T999999
U2 to U27050
U33051 to U33990
U37651 to U38784
U64651 to U79650
U80151 to U100150
U150151 to U152552

EXCEPTIONS: Some extinguishers listed above have been rebuilt recently and should not be returned. These are stamped around the outlet nozzle with symbols running from A-48 to L-48, or the letter X.

This entire announcement applies only to Pyrene Vaporizing Liquid Pump Type Extinguishers. It does not apply to the 2-quart and 1-gallon Pyrene Vaporizing Liquid Pressure Type Extinguishers or to Pyrene Foam, Gas-Cartridge, Soda-Acid, or Pump Tank Extinguishers of any size, or to Pyrene Air Foam Equipment.

Regardless of cost, we want to replace every one of these extinguishers about which there is the slightest shadow of doubt.

Over the years, Pyrene Fire Extinguishers have become known as the world's finest fire extinguishers. We are profoundly conscious of, and profoundly grateful for, the trust that has been universally placed in our products.

That is why we are making every effort to retrieve and to replace the extinguishers and liquid affected by this problem.

PYRENE MANUFACTURING COMPANY
NEWARK 8, N. J.
CHICAGO ATLANTA KANSAS CITY SAN FRANCISCO

*T. M. Reg. U. S. Pat. Off.

DO YOU KNOW?

By Using BEMIS TITE-FIT TUBING

YOU

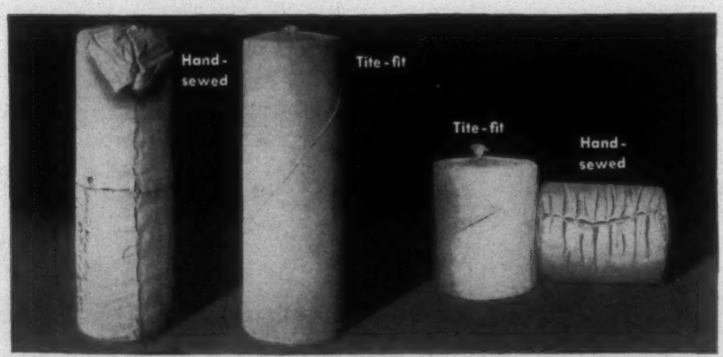
REDUCE labor and material costs, because you:
ELIMINATE handling heavy bales of burlap.
ELIMINATE time required to open bales and remove bale coverings.
ELIMINATE time required to cut burlap into sheets.
ELIMINATE using more burlap than necessary.
ELIMINATE all hand sewing.
IMPROVE the appearance of your rolls.

YOUR CUSTOMERS

RECEIVE neat packages that are easy to handle, because there's a handy ear on each end.

SAVE TIME as TITE-FIT TUBING is easily and quickly removed. Just untwist wire tie at one end and slip tubing off.

ELIMINATE chance of cutting into contents and damaging goods, as no cutting of sewing thread or goods is necessary.



This versatile tubing fits almost any shape and a wide range of package sizes. One roll may cover many different diameters and lengths neatly, without waste because TITE-FIT TUBING has *stretch* in both directions.

5 QUICK STEPS

That's all . . . when you package with Tite-Fit Tubing

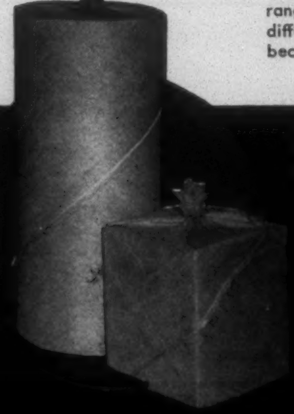
1. Pull tube well down over object, leaving an overage to cover bottom

2. Turn package on side and fasten tube at bottom with a wire tie.

3. Turn package upright and use both hands to take up slack.

4. Fasten top with a wire tie close to object to assure tight fit.

5. Cut off the Tite-Fit Tubing about 3 inches above the wire tie.



BEMIS BRO. BAG CO.

Brooklyn 32, New York

Canadian Bag Co., Montreal, and the Ontario Bag Co., Port Colborne, Ontario, are licensed manufacturers of TITE-FIT TUBING in Canada.

MAIL COUPON NOW

Bemis Bro. Bag Co.
5126 Second Ave., Brooklyn, N. Y.

☐ Send descriptive folder on TITE-FIT TUBING
☐ Send sample. Our packages are approximately _______ inches in circumference. (Please specify)

Name ____________________
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NEW *Textilume* FLUORESCENT FIXTURE DEFIES CORROSION

The new Wheeler *Textilume* is a modern fluorescent unit designed specifically for textile mills. In addition to its high reflection factor, it offers long, trouble-free service under the most severe moisture and humidity conditions.

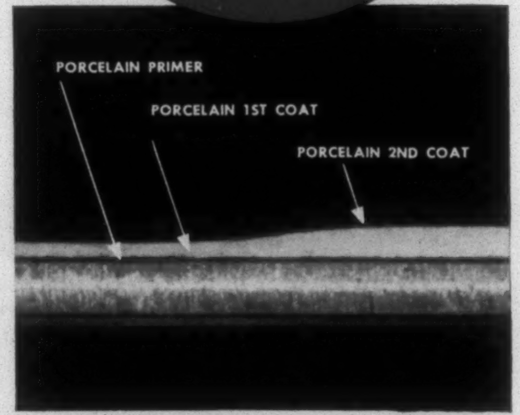
Every square inch of its one-piece welded body is sealed with smooth, uniformly-applied vitreous porcelain enamel . . . no exposed joints or seams to catch water and cause rust. Its suspension flanges are cadmium plated and gasketed.

All parts of the new *Textilume* are readily accessible. New "Flex-Loc" safety lampholders are the latest type . . . automatically self-adjusting to variation in lamp length.

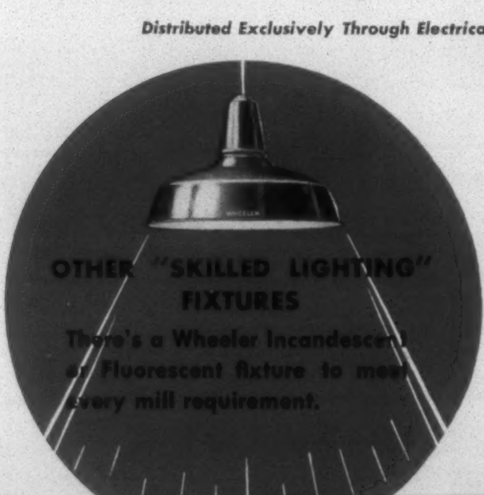
For long, rust-free life . . . lowest cost in the long run . . . investigate this new creation of "Skilled Lighting". Get complete specifications. Compare its construction details. Write *Wheeler Reflector Co., 275 Congress St., Boston 10, Mass.*

Distributed Exclusively Through Electrical Wholesalers

It's Porcelain-Sealed, INSIDE AND OUT



ACTUAL PHOTO (magnified) showing cross-section of steel sheet with 1st, 2nd and 3rd Vitreous Porcelain-Enamel coatings used on Wheeler Units.



OTHER "SKILLED LIGHTING" FIXTURES

There's a Wheeler Incandescent or Fluorescent fixture to meet every mill requirement.

RLM SOLID NECK INCANDESCENT REFLECTOR (*at left*) provides maximum lighting efficiency indoors or out. Ruggedly built. Vitreous enamel only. 75 to 1500 watts.

Wheeler REFLECTORS

SKILLED LIGHTING

MADE BY SPECIALISTS IN LIGHTING EQUIPMENT SINCE 1881

the bulletin board

Questions, answers, comments and other material submitted by the readers for use in this column should be addressed to Editors, TEXTILE BULLETIN, P. O. Box 1225, Charlotte 1, N. C. All material will be edited properly before publication.

A WELCOME CONTRIBUTOR

Sirs:

I am attaching an article which I thought might interest you for publication in TEXTILE BULLETIN. Here is an example of how we are trying to build the prestige of the textile worker.

L. E. Richards
Consultant
Spray (N. C.) Cotton Mills

¶ Mr. Richards' article describes his company's method of developing pride in being part of the textile industry. It will be found in this issue.—EDS.

S. T. A. MEMBERSHIP

Sirs:

Will you please advise me what is necessary for me to do to have my superintendent and overseers made members of the Southern Textile Association? The mill will of course pay the dues.

W. P. Hazelwood
President and Treasurer
Pickett Cotton Mills, Inc.
High Point, N. C.

¶ Southern Textile Association dues are $2 per year for operating executives and other textile mill personnel. No application for membership need be made.—EDS.

AMPLIFICATION AND CORRECTION

Sirs:

In the last issue [March] of the BULLETIN on Page 92, you published an article regarding the alleged liquidation of Slater Mfg. Co. This information was incorrect and was the result of some sloppy reporting. The person who obtained the information just didn't read the report carefully as submitted to the Securities and Exchange Commission in Washington.

C. E. Baxter
J. P. Stevens & Co., Inc.
Empire State Building
New York 1, N. Y.

¶ Our information was picked up from one of the trade's daily papers, which subsequently published the following correction: "In view of the incorrect report in connection with subsidiaries of J. P. Stevens & Co., it is pointed out that Slater Co., Inc. (Mass.), is inactive, and it was intended to have this company dissolved during the fiscal year 1947-48. It was this company which was dissolved and not the Slater Mfg. Co., Inc., a Delaware corporation, located in Slater, S. C., which continues actively in the manufacture of rayon fabrics." TEXTILE BULLETIN does not excuse itself for furthering the misinformation, and is glad to make the correction.—EDS.

FACTS ABOUT RAYON

Sirs:

Will you please send me any material you may have on rayon or rubber? I want to trace either or both commodities from the raw material through the channels of distribution.

(Mrs.) Love Gudger
Chandler (N. C.) High School

¶ We suggest contacting Textile Economics Bureau, Inc., 10 East 40th Street, New York 16, N. Y., which is a good source for rayon information. Any of the rayon producers should be helpful, also. Rubber is not our line, unless it is when we sometimes have to stretch out material to fill up the magazine.—EDS.

BLEACHING, DYEING, FINISHING

Sirs:

Over the past several years we have noticed a good many articles in TEXTILE BULLETIN on many phases of bleaching, dyeing and finishing. We wonder if any of these articles have been put into book form, and if so would like some literature on what you have available under this general heading. We have in mind particularly a series of articles which we understand was edited by William Dodson, and will appreciate your advice as to where we may obtain this series or other similar works.

John H. O'Neill, Chief Chemist
Trion (Ga.) Division
Riegel Textile Corp.

¶ The articles which Mr. Dodson wrote for TEXTILE BULLETIN some years ago were published by us in book form, and a copy has been sent to Mr. O'Neill. We currently are carrying a series of articles by Francis Tripp, head of the New Bedford (Mass.) Textile Institute Chemistry Department. We intend to publish them in book form upon conclusion of the present series.—EDS.

SALVAGING SOILED RAGS

Sirs:

We refer to an article appearing in the January issue of TEXTILE BULLETIN beginning on Page 52 and entitled "Evolution of an Idea," by H. E. Wenrich. On Page 55 Mr. Wenrich refers to a system of salvaging soiled cleaning rags and running them through an extractor. He makes note of certain types of chemicals that are used for cleaning the rags. Can the author write us in detail just how this system works and what chemicals are used and in what proportion?

L. H. Roberts, Assistant Manager
The Linen Thread Co., Inc.
Blue Mountain, Ala.

¶ Mr. Wenrich states: "When this cleaning method first was undertaken, running the rags through with carbon tetrachloride did a very satisfying job and permitted the liquid to be reused after it was filtered. Naptha also was satisfactory. It also was found that cleaning rags could be divided into two assortments, with the cleaner rags dipped in carbon tetrachloride and rubbed wet over machinery to remove grease and oil. The second, or dry, rag is for wiping off excess liquid and dry lint. The wet rag became a problem when we tried to remove the heavy soakings of grease." Mr. Roberts has been referred to several producers of cleaning chemicals.—EDS.

MORE COMPLIMENTS

Sirs:

I wish to congratulate you and the staff on your new TEXTILE BULLETIN. It really is a well-balanced magazine and is good reading for our Southern textile industry. Please send us advertising rates.

C. H. Gingher
Clair H. Gingher & Son
Greensboro, N. C.

Sirs:

Since you are now publishing the BULLETIN on a monthly basis, and having thoroughly examined the three 1948 issues, I am convinced that the change was a logical one that will appeal to your readers. I have been reading your magazine from the time of its first publication and have always noticed that your editorials are fearlessly written and designed for the best interests

WHY YOU GET EVEN ACCURATE DEPENDABLE FEEDING with the NEW and IMPROVED

Knotwood

PAT. NOS. 2,258,035-2,426,794

METAL FEED APRONS

You modernize—and economize—with these improved KNOTWOOD Metal Feed Aprons. Every single feature of this precision equipment has been designed for one thing alone—continuous, profitable production. For instance:

KNOTWOOD APRONS DO NOT STRETCH BECAUSE OF THEIR ALL-METAL, INTERLOCKING CONSTRUCTION AND PRECISION ADJUSTMENT TO THE BARRED DRIVING ROLL

The new KNOTWOOD Aprons have been thoroughly tested and approved by leading mills. Their smooth, positive drive, simple, efficient construction and long life mean more and better production at less cost.

Built, installed and serviced in our Charlotte plant and offices.

The Secret is

ALL-METAL, INTERLOCKING CONSTRUCTION

Southern Knotwood Apron Company

Branch of Emmons Loom Harness Company

118½ West Fourth St. Charlotte 1, North Carolina

GEORGE A. FIELD, Manager

of the textile industry, even if the views expressed therein may not have suited a few critics. The arrangement of the various sections in your monthly is an improvement which I think will be pleasing to your subscribers, as will also the general arrangement throughout. Congratulations on your long period of publication, which has been of great advantage to the entire industry. More power to you in your strong editorials as I look forward to each succeeding number of the BULLETIN.

Edwin Howard
P. O. Box 1076
Greenville, S. C.

¶ Mr. Gingher, formerly with Burlington Mills Corp., now is a distributor of mill supplies in partnership with his son. Mr. Howard, now a consultant for Veeder-Root, Inc., is the retired Southern sales manager for that company.—EDS.

RESEARCH JOURNAL SHORTAGE

Sirs:

We have received your copy of the July, 1946, issue of *Textile Research Journal* and we are very glad to have it indeed. Thank you.

Julian S. Jacobs, Director
Department of Publications
Textile Research Institute, Inc.
10 East 40th Street
New York 16, N. Y.

¶ T. R. I. has nearly exhausted the following issues of its *Journal:* July, 1934; December, 1934; August, 1935; December, 1941; January, 1942; April, 1943; and July, 1946. Readers of this magazine who can spare the listed issues may wish to send them to Mr. Jacobs.—EDS.

THE 1948 MILL DIRECTORY

Sirs:

We are badly in need of the 1948 Edition of *Clark's Directory of Southern Textile Mills.* If this publication is ready for distribution will you kindly send us a copy? This booklet is of great value to us, and it is a great service that you render in providing it for people who need it like we do.

E. G. Wilson, Executive Secretary
Southern Conference
on Human Relations in Industry
Atlanta, Ga.

¶ The 1948 Edition was ready for distribution in December, and there still is a good supply. Although the staff strives mightily for accuracy, errors do creep in; we will appreciate having these called to our attention.—EDS.

TAKE A BOW, MR. MAC

Sirs:

We have just finished reading [the] article, "Viewing The Social Structure Of Man" (February, 1948, issue, Page 37).

The writer always enjoys your [W. M. McLaurine] articles and he considers this one of the best you have given us.

These articles are well worth the price we pay for the BULLETIN.

James L. Turner, Manager
Dominion Yarns, Ltd.
Welland, Ontario, Canada

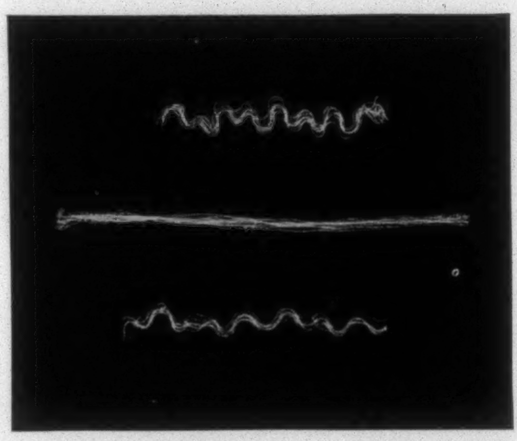
¶ Mr. Turner and other readers will be interested to know that Mr. McLaurine is beginning another series in this issue, "Building Manpower In Industry."—EDS.

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y.

April, 1948

Avisco Crimped Staple Adds New Proof of Rayon's Versatility



Avisco Crimped Staple (top), can be temporarily straightened by wetting and drying out under tension (center). When wet and dried out again in a relaxed state, its full crimp returns (bottom).

Introduced little more than a year ago by American Viscose Corporation, the new Avisco Crimped Staple continues demonstrating rayon's title as the most versatile of fibers. It is already going into fabrics for blankets, dresses, suits, sport shirts, draperies and many more things . . . by itself or in blends.

To all of the other well-known advantages of rayon, the new crimped viscose rayon staple adds the quality of permanent waviness. This gives soft nap fabrics such as blankets greater bulk and loft, without increasing their weight. It makes high-twist goods such as gabardines feel lively and crisp. It reduces seam raveling during laundering.

While this product has advantages on all systems, these are particularly well demonstrated on the worsted system. Cohesion is excellent, aiding in gilling, combing, blending and drawing. In the last, the added cohesion permits less twist—a production boon — while ends down per hour and fly waste are materially lessened.

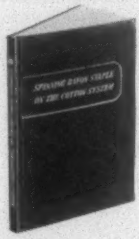
Other advantages on various systems are set forth in the booklet, "Avisco Crimped Staple," which also includes swatches of interesting new materials containing the fiber. The booklet is being distributed to textile technicians and manufacturers.

"KNOW YOUR FABRICS"

An informative discussion program, especially adapted for women's clubs, has been prepared by AVC. Entitled "Know Your Fabrics," it is now being distributed to 10,000 women's clubs throughout the country. It includes a complete script for a forum meeting, reference leaflets, working guide for the program chairman, a quiz for members and other useful club material.

It is part of a long-term program of consumer service sponsored by American Viscose, to give millions of women accurate, sensible information about buying, using, and caring for rayon merchandise.

Published by AVC, "Spinning Rayon Staple on the Cotton System," a 156-page handbook of useful facts, figures, charts and graphs is now being distributed free to technically qualified persons who request it on their business letterheads.



ANOTHER EXAMPLE OF THE *Avisco* 4-PLY SERVICE AT WORK

Witness the new Juilliard rayon gabardine for spring suitings—to which 75% Avisco crimped rayon staple, combined with 25% acetate rayon staple, imparts a new, incredibly soft, light hand. Fiber Research developed Avisco Crimped Staple. Textile Research and Fabric Development showed how to make the best use of it. Converting Relations aided in perfecting the finish. It's another clear example of how the Avisco Service Program leads to finer rayon fabrics.

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

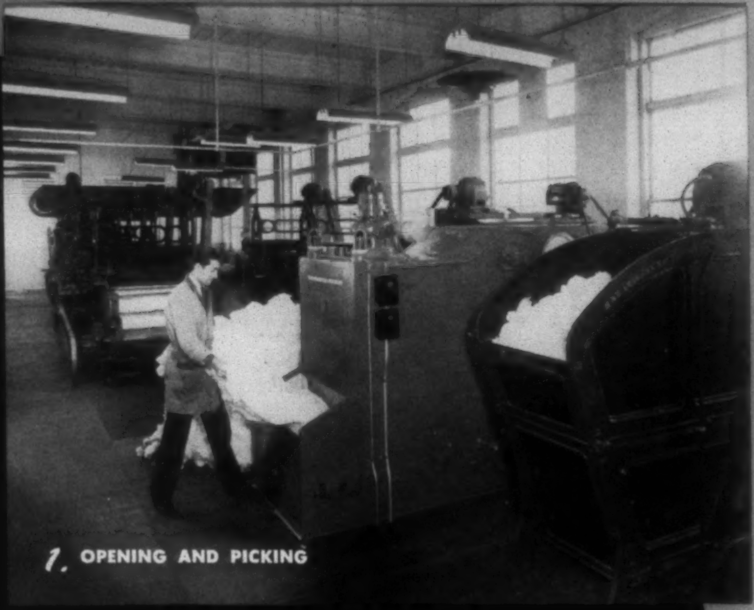
Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

RAYON 20 YEARS AGO

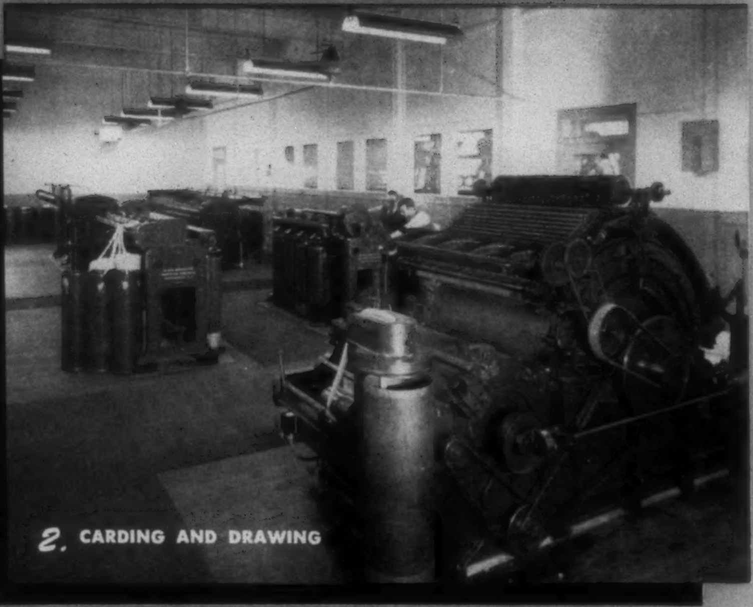
Chicago, April, 1928—"It's an ill wind . . . !" Business is booming in *rayon* umbrellas, thanks to more than the usual amount of rain blowing into the "windy city."

New York, April, 1928—Plans of the new Rayon Institute for the advancement of the rayon industry include advertising, publicity and consumer educational material. The annual budget is said to be $500,000.

H & B ANNOUNCES



1. OPENING AND PICKING



2. CARDING AND DRAWING

A PILOT

The old exhibition room at H & B has been completely renovated and enlarged to the dimensions partially shown in these photographs. Added floor space, modern machinery and adequate facilities make possible extensive experimental and development work.

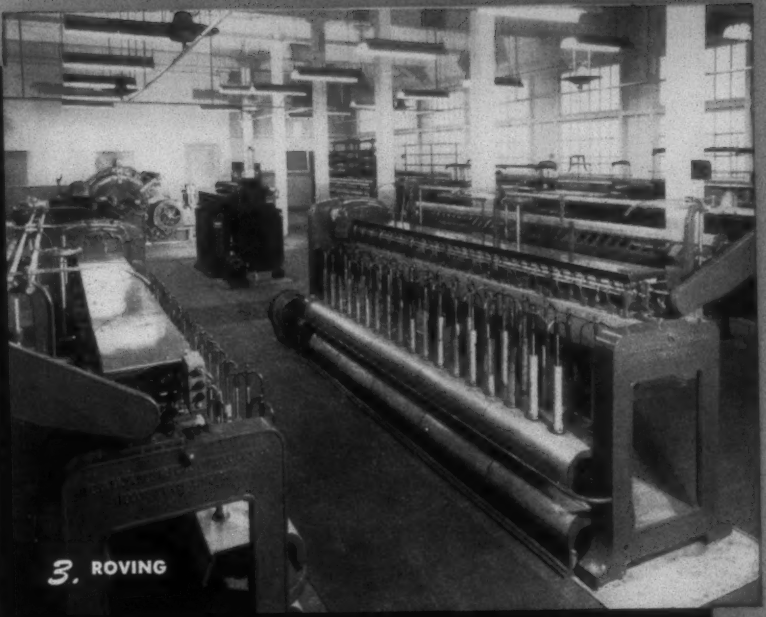
H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

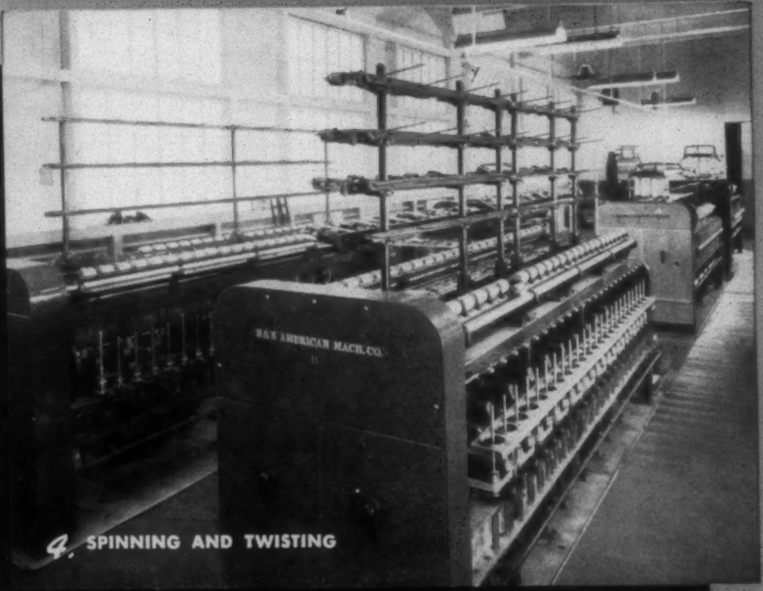
NEW EXHIBITION ROOMS

MILL



3. ROVING

This pilot mill takes cotton from bale to twisted yarn on modern H & B textile machinery. Customers and interested textile men are cordially invited to visit these new exhibition rooms at H & B.



4. SPINNING AND TWISTING

MACHINE CO.

Textile Machinery

DIVISION PAWTUCKET, RHODE ISLAND, U. S. A.

BRANCH OFFICES
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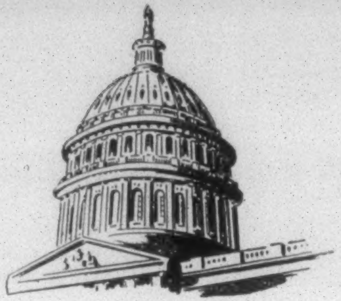


WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Limited restoration of some war controls is very possible after the election. Food, clothing and other necessities sent abroad under E. R. P. will create artificial shortages at home, and a sharp demand for legislative remedy is probable. While Congress is averse to again imposing controls, or restoring O. P. A., a series of pinches in vital commodities can bring partial revival. The Administration favors new controls now, but will not move until after the election. After that, much depends on who gets elected.

Unions stand to lose their strongest protection because of John L. Lewis. The House Labor Committee, with Chairman Hartley leading, is ready to report out measures to make all unions equally amenable with corporations to the anti-trust laws, and increase the penalties under those laws.

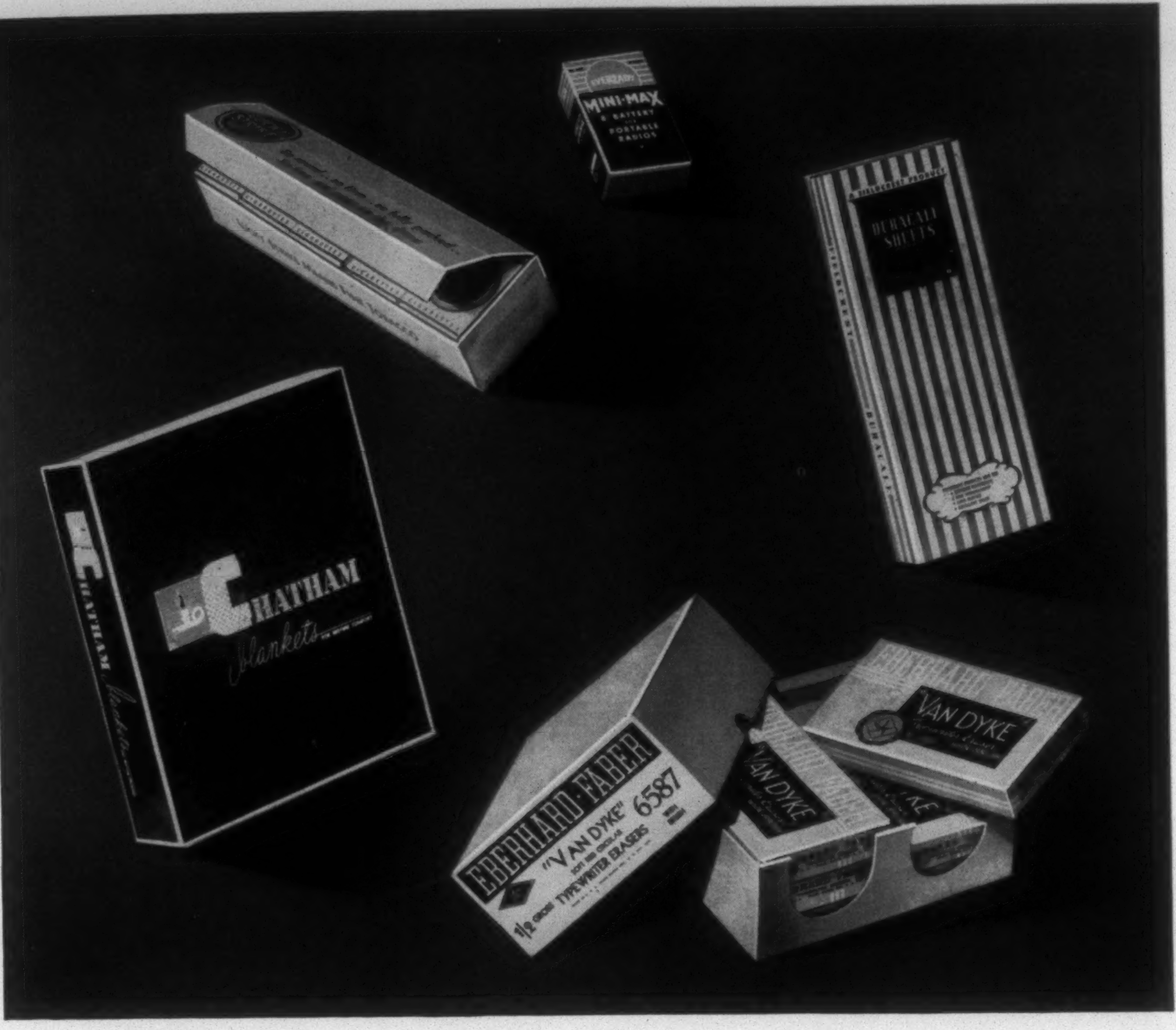
The President counseled with Clark, Snyder and Forrestal on the coal strike, and for the first time, did not seek Philip Murray's advice. His aides, including Steelman, counseled use again of the old formula of appeasement for Lewis and crack-down for the operators. Cabinet members told him the temper of the country would not sanction appeasement.

With thousands of workers made idle by the coal shortage, the desks of senators and House members are piled high with protests from workers and union members against Lewis tactics. Many letters urge the economic menace of Lewis be permanently ended through new controls on unions and collective bargaining processes.

Required registration of unions and all their collective bargaining agreements with N. L. L. B., and prohibition of industry-wide bargaining, is under discussion among members of the House and Senate Labor committees. Drastic tightening of the anti-Communist ban, and outlawing any Communist dominated union, are under consideration.

Communists centered in New York have decided to force entry of Negroes into leading colleges and universities, and into all associations and clubs of college students and graduates, according to information to the House Un-American Activities Committee. Three Southern state universities high on the list as "entering wedges" are those of North Carolina, Virginia and Florida, with Kentucky, Oklahoma and Texas in the second bracket.

Second phase of the college invasion is to force entry of Negroes into Greek letter fraternities. The ultimate aim is to



LEADERS' CHOICE for BETTER PACKAGING

Yes, leading manufacturers in almost every branch of our great American economic system choose Old Dominion for their packaging service. For whatever the product may be — textiles, furniture, food, machine tools, cosmetics, candy or shoes — Old Dominion offers a superior package for every job.

Consult Old Dominion today about your packaging plans. Their experts will be pleased to assist you in set-up, corrugated, canister, folding and acetate types of containers. Send for General Line Folder #94.

OLD DOMINION *Box Company Inc.*

PLANTS LOCATED THROUGHOUT THE SOUTH

CHARLOTTE, N. CAROLINA

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION force Negroes into all business and social clubs, and to break down barriers in all public recreational facilities.

The deteriorating political fortune of Mr. Truman is making it easy for Republican leaders in Congress to command conservative Democratic votes, offsetting their own recalcitrants, in passing vital legislative proposals. The huge majorities by which the tax reduction veto was over-ridden were piled up by conservative Democratic votes. Mr. Truman is not expected to send any more messages, or any more legislative proposals, to Congress in this session unless in an emergency or to make a record. Pressure for such matters as military training will come from cabinet members rather than Mr. Truman.

The President's trouble stems from his reliance on a little group of aides in the White House, with almost total lack of contact with party leaders in Congress. Some of his messages in this session have fallen like sudden thunderclaps on Barkley and Rayburn. He has appeared to learn only what his aides seemed to think he would like to know.

Labor's utmost opposition will be leveled at the Ball Wage-Hour Bill, on which two weeks of hearings started April 19. The bill calls for a base of 60 cents, with a sliding scale from 50 to 70 cents. Labor leaders will demand a fixed minimum of 79 cents.

Victory for Lewis in his demand for higher pensions is expected to be followed immediately by a flood of such demands in all branches of industry. Such demands are in readiness to be made by C. I. O.'s steel, motor and electrical workers. Pensions would be in addition to Federal Social Security benefits.

Continuance of the coal strike for 30 days, with enforced unemployment in industries using coal, would have made 1948 the year of greatest wage loss in national history, according to calculations of Department of Labor officials. Loss to coal miners alone was $30,000,000 a week.

With coal stocks reduced to the vanishing point, the country might have to face its most serious post-war economic crisis on June 30, when the bituminous coal wage contract expires. The Lewis strategy has been to prevent industry from stockpiling for a prolonged strike crisis.

Lowered income taxes for 54,500,000 taxpayers is to be followed by a general revision of corporate and excise tax levies. The House Ways and Means Committee has started work on a revision proposal, with the aim of bringing it in early in the next session. A counterpart will be a general revision of the Federal Internal Revenue code.

C. I. O. has decided to go in for the formation of craft unions. The move is in defense of the heavy raids which A. F. of L. has made on C. I. O. industrial unions in the formation of new craft units under the T.-H. Law. In promising craft autonomy to its own members, C. I. O. hopes to win over some of the A. F. of L. craft groups.

1,000,000

ONE MILLION

Marquette

ROLLER BEARING SPINDLES

NOW IN OPERATION!

The **Marquette METAL PRODUCTS CO.**

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSES
FUEL OIL INJECTORS • PRECISION PARTS AND ASSEMBLIES

BYRD MILLER, WOODSIDE BLDG., GREENVILLE, S. C. • WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA.

your LeBlond distributor. . . strategically located near you . . . knows metal turning as few men know it. Since he offers the largest complete line of lathes available from one manufacturer, his unbiased advice on the selection of the proper type and size for any specific use can be relied upon. Call him today without obligation.

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THE HENRY WALKE CO.
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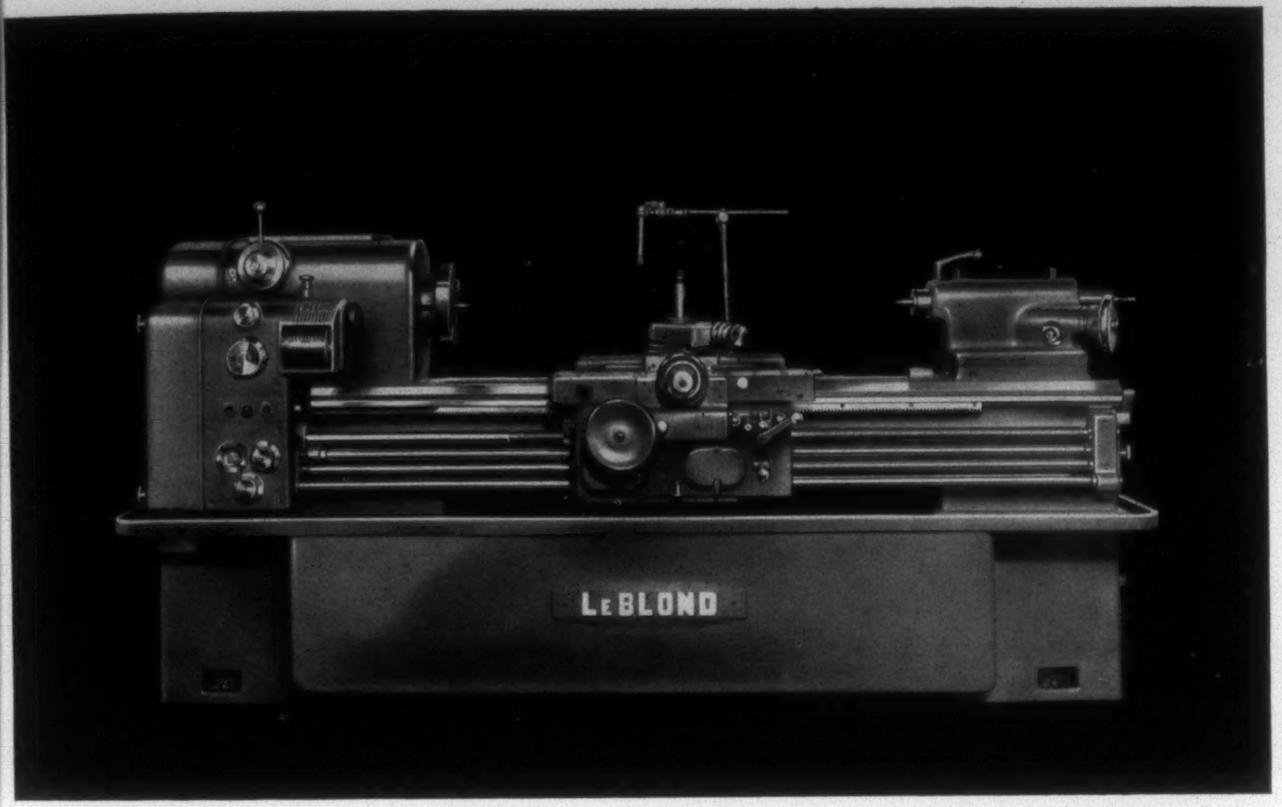
720 W. BAY ST., PHONE 4-6781



WITH THE NEW LeBLOND 16" MODEL RT TOOL ROOM LATHE

When you're deciding on a new tool room lathe, consider this: the LeBlond 16" Model RT is designed not only to make better tools, faster, but to help lower your present tool room costs. You get more spindle speeds—over 300, 6 to 1500 rpm, a wider range of speeds, all controlled by a single lever. Without stopping the spindle, you can select over 100 speeds within any one of three different ranges. You'll like it . . . your operators will love it.

. . . more modern tool room lathe advantages with the new Model RT:

- Universal power rapid traverse moves carriage, cross slide, and tailstock.
- Variable speed drive for more power more easily controlled.
- Combination gear and belt drive headstock.
- All main drive gears hardened and ground.
- Universal quick change box totally enclosed, lubricated automatically.
- One-piece apron with positive jaw feed clutch, and automatic lubrication.
- Thrust-lock tailstock with worm and rack construction; full length bearing for spindle; direct reading spindle travel dial.
- Hardened and ground steel bed ways.

For complete and detailed information on this or any other lathe in the complete LeBlond line, call or write your LeBlond distributor. The R. K. LeBlond Machine Tool Co., Cincinnati 8, Ohio.

LeBLOND

The World Looks To America

A TRIBUTE to the American system of mass production, with its high degree of industrial mechanization, contained in reports of British "working party" committees sent to this country for on-the-job studies of productivity per man hour, constitutes additional proof that American free enterprise out-produces its English counterpart, even under the guiding pressure of a Socialistic Labor government.

Reports by five of these committees stress that the higher output of American workers can be credited to the greater use of machinery throughout our industries. These five committees studied American factory methods in the production of cotton goods, boots and shoes, apparel, furniture and woolens, and compared techniques and output per man-hour with British practice.

They found that the British output per man-hour lags behind American records by 18 to 49 per cent in spinning, 80 to 85 per cent in winding, 79 to 89 per cent in beaming, and 56 to 67 per cent in weaving. Although the modern cotton textile industry got its start in England, the British committee found that, for the industry as a whole, the American worker produced "twice as much" as the Briton. Significantly, mechanization of operations was considered the determining factor in the difference.

In the boot and shoe factories a committee found that the production of American workers was "three-quarters as high again" as in similar British plants. Another group discovered that production per worker in the American apparel industry was 25 per cent higher for men's wear generally and 50 per cent greater in shirts. Also, despite the long tradition of quality in British clothing, they concluded that American standards of workmanship were higher in comparison.

It was probably an understandable blow to British pride to be forced to admit that the average American worker in the woolen industry in 1945 turned out 3,633 linear yards while his British counterpart averaged only 1,835 linear yards in 1937, the last comparable year. For this, the United Kingdom representatives credited largely the use of automatic looms, and added that "since the hours worked in the United States were shorter, the difference per man-hour would be still greater."

The committee that checked the furniture industry reported the degree of mechanization much higher in the U. S. factories and output per worker at a higher level, but did not state the exact amount of the difference.

These studies bear out what tool engineers and many others in American industry have long known: — That mechanization makes possible not only increased production per worker, but higher output in relation to hours worked. Far-sighted industrialists in these United States have utilized the advantages of mechanization for many years and the result is that this conutry has attained the highest standard of living the world has ever known. Perhaps the findings of the British "working committees" will impress this fact upon those to whom they report, and those in positions of industrial and political leadership in that country will realize that skill and hard work alone are not the answer.

Tools and machines must be brought into the picture in a prominent role before the fruits of any industrial scheme can be poured forth in sufficient volume to satisfy the mass demands of a nation. When they are efficiently and widely adopted in any country they hew a never-ending road to greater prosperity and well-being for all of the people, not only of that country, but throughout the world.

Now, and for many years to come, the world looks to American "know-how" for the answers to its economic problems—*The Tool Engineer.*

Business Information

I WOULD like to urge that each of us undertake to do more than we have done to keep our employees and the public informed about the details of our respective businesses and about business facts in general. The important thing is for each of us to do something more than we have done in the past. Upon such efforts may depend not only the success of your own business, but the maintenance of the private competitive enterprise system which has made this country the envy of the rest of the world.—From an address by *Frank M. Surface,* Esso Standard Oil Co.

Are You Educated?

YOU may be a college graduate, but are you educated?

We all have our own definition of what constitutes an educated man, but Socrates, the great Greek philosopher of ancient times, perhaps has one of the best answers to the eternal question, "Who are the educated?"

Socrates said, "First, those who manage well the circumstances which they encounter daily and who possess a judgment which is accurate in meeting occasions as they arise and rarely miss the expedient course of action; next, those who are decent and honorable in their intercourse with all men, bearing easily and good-naturedly what is unpleasant or offensive in others, and being themselves as agreeable and reasonable to their associates as it is humanly possible to be."

"Furthermore, those who hold their pleasure always under control and are not unduly overcome by their misfortunes, bearing up under them bravely and in a manner worthy of our common nature; finally and most important of all, those who are not spoiled by their successes and who do not desert their true selves, but hold their ground steadfastly as wise and sober minded men, rejoicing no more in the good things which have come to them through chance than in those which through their own nature and intelligence are theirs through birth."

"Those who have a character which is in accord, not with one of those things, but with all of them — these I maintain are educated and whole men, possessed of all the virtues of man."—*The Slater News,* Slater (S. C.) Mfg. Co.

The Answer to Better Extracting...

PROCTOR Continuous Extracting Unit for Raw Stock

Here are the highlights of the operation of this modern unit, which replaces the laborious intermittent method of centrifugal extracting.

An automatic feed delivers a uniform amount of wet stock to the squeeze rolls. A vibrating plate, arranged between the self-feed and the squeeze rolls, feeds the layer of wet stock into the nip of the rolls in such a manner as to prevent droppage of wet stock or bunching of the material as it goes through the rolls.

Here are the results: There is better opening of matted stock . . . wet spots in dried stock are eliminated . . . production is constant and very high . . . time losses are virtually eliminated . . . operating costs are kept to a minimum.

The initial price of this modern Proctor unit is probably higher than that of any other extracting equipment made. However, when you consider that with it you can combine increased production with improved quality—it is obvious that the Proctor continuous extracting unit will pay for itself many times over. Even with the somewhat higher initial investment, viewed over the long run, Proctor equipment is actually the least expensive.

PHILADELPHIA 20, PA.

PROCTOR & SCHWARTZ
INC.

textile bulletin

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Three Races

God made three races, the white, the yellow and the black.

HE could have made one race but HE made three and at no place in the Bible is it suggested that the three races should be merged and it is reasonable to suppose that had there been any design for a merging of the three races, only one race would have been created. In fact, in Leviticus 19-19, it is *said "Thou shalt not let thy cattle gender with a diverse kind. Thou shalt not sew thy field with mingled seed."*

The yellow race made the most rapid progress in the beginning and there is the tradition that the Chinese reached an advanced state of culture and made many inventions while the white race was still living in caves and fighting wild animals with clubs.

There is a tradition that the Chinese invented and used paper, gun powder, clocks and many other things hundreds of years before they were known to the white race.

The yellow race made its "run" and then fell back and has made no progress during the last half-century, in fact, its governments and its scale of living is today very inferior to that of the white race.

The evolution of the white race was very slow but always it has been upward.

For generations the white race lived in caves and wore the skins of animals as clothing but gradually they made better stone axes and invented flint points for their arrows.

As time went on they formed groups and built villages and evolved a form of government.

As still more time passed they became interested in both education and religion and in a better standard of living.

From living in caves and wearing skins of animals to building of great cities, and the high standard of living of today required many centuries but the progress of the white race has been steady and it has always been upward.

Some divisions of the white race have made more progress than others but nowhere do the yellow race or the black race live upon a higher plane than the lowest divisions of the white race.

The third race, the black race, has never at any time made any upward progress except when in contact with the white race and even then has advanced but little.

Where there have been no contacts with the white race and even where there have been contacts but no control exercised by whites the Negroes of Africa live upon the same plane as they did 2,000 years ago, in fact, many of the tribes in Africa live today upon a scale much lower than that of the white race when they lived in caves and wore animal skins.

The following are extracts from "In Witch Bound Africa" as written by Frank H. Melland after an extended visit to the Dark Continent:

> In every village there are elders who are skilled in the cult of the spirits and can locate spiritual troubles by divining rod or other means.
>
> If a child cuts its upper incisors before its lowers it is thrown into the river. The reason for this custom—it is believed that every time one of the milk teeth comes out a person dies. If a woman allowed the child to live she would be guilty of murder of many people. After the child has been thrown away the mother returns without mourning.
>
> A child who does not walk at the proper time is also killed. The reason for this is that the child is supposed to be waiting to walk until its relatives are dead. To save hurrying the death of so many people the child is drowned.
>
> Native girls are wed between the ages of 8 to 13.
>
> At African witch-trials the witch, when condemned, falls on her knees and appeals for mercy; but toward the end she admits her witchcraft giving full details thereof and ceases to supplicate.
>
> Native infant mortality varies from 60 to 75 per cent.

The following are extracts from "On the Trail of the Pigmies" by Dr. Leonard John Vanden Berg:

> In time of famine the natives do not kill their animals but drink their blood.
>
> They bury alive a girl born as one of twins.
>
> The Wakamba have little respect for the dead and for the rank and file there is not even given a burial.
>
> The women are a lazy collection, indolent and lackadaisical to a degree.
>
> Why do they not escape from the forest? This is a hard question to answer. It may be on account of their *inate objection to work.* They live like creeping things in the woods. *They neither sow nor harvest.* No agricultural instincts are to be found in their souls.
>
> They people have no well defined idea of their own origin. They have no written legend or any tangible historical knowledge of their own.
>
> They do, as a matter of fact, live little beyond monkeys.

Even among the Negro tribes in Africa the centuries have witnessed very little amalgation or merging and Dr. Berg said in his book, *"It is remarkable how nature itself directs the separation of races and tribes and prescribes their boundaries."*

This rule of nature influences Negroes as well as whites and there is no evidence that Negroes, except when prodded by unthinking whites, have any desire to associate with or marry whites.

Thomas Jefferson did not favor the amalgation of the Negroes with whites and became interested in sending freed Negroes to colonies in Africa.

In 1817 the American Colonization Society was formed and in 1819 the Congress of the United States appropriated

$100,000, which was a large sum in those days, for the establishment of the Negro Republic Liberia.

The freed Negroes, who were sent there and left without supervision by whites, soon sank to the level of the Negro natives of Africa.

As late as Sept. 24, 1917, our Congress made a donation of $1,000,000 to Liberia.

In 1928, Harvey S. Firestone and associates, being interested in securing a source of rubber, sent representatives to Liberia.

A report of those representatives says:

> The Firestone engineers sank the first wells ever drilled in Liberia. There was not a saw mill in the country until Firestone came and scarcely a saw.
>
> While it need not cause surprise that the outside world knows little of Liberia, the plain truth is that Liberia knew little of its own territory until the coming of Firestone.
>
> Firestone has made it possible to reduce to writing and preserve the most commonly used dialect, the Kpelle language. No books in the tongue existed. No less than 27 dialects are spoken by the natives.
>
> Americans think of slavery as belonging to some distant time. Yet slavery endures to this day in Liberia.
>
> The interior of Liberia is as truly the dark continent as it was half a century ago when Stanley revealed unknown Africa.
>
> Upon authority of League of Nations Commission in 1930 it was stated that the population of American extraction constitute the governing class, *the voting franchise being restricted and few natives admitted to this class.*
>
> It was freely testified before the commission that excessive fines have been imposed by the government for failure to do "road work" and similar tasks, and men and women flogged.
>
> Witnesses pleading in their own behalf stated that they had been compelled to pawn members of their own families and tribes in order to pay these excessive fines.
>
> It is one of the most lamentable tragedies of history that those who went forth 100 years ago as liberators of members of their own race, bearing the motto, "Love of liberty has brought us here," should be the oppressors of 2,000,000 members of inofffensive native tribes.

Lord Buxton said, "Liberia has in every possible way shown her unfitness to be a member of the League of Nations and she ought to be 'struck off the rolls.' "

The freed American Negroes who were sent to establish Liberia more than 100 years ago have practiced and still practice slavery and allow very few of the native Negroes to vote.

Those who seek to promote social equality between whites and Negroes, in the United States, cite the fact that one or two Negroes have become noted singers as if that was an evidence of intelligence.

Go any night to the edge of a pond and you will hear one or two frogs who make exceptionally melodious sounds.

Many articles have been written about Dr. Carver of Tuskegee Institute and he is often described as a great scientist.

Dr. Carver made an oil out of peanuts and some products out of sweet potatoes but all of his "inventions" were too impractical and two expensive and not a single product he invented is being made commercially today.

Dr. Carver may have been a good chemistry teacher but none of his pupils has ever "invented" a product that has had a commercial value.

God made three races, the white, the yellow and the black, but they were not all endowed with the same qualities.

They started together but because of qualities or lack of qualities the progress of each race has been different.

The yellow race blazed a brilliant path for a while and then sank back to a low standard of living.

The white race moved slowly but constantly made progress and finally reached a high standard. The black race, except where helped by the white race, has stood still and lives in Africa about upon the same scale as in the beginning.

A lot of people who live in other sections of the United States hate the white people of the Southern states so intensely that they dream of forcing them to amalgamate with the Negro race but they will never realize their dream.

That nature has a way of controlling such matters is evidenced by the fact that during the 83 years since the Civil War, not over ten white men have married Negro women.

A few white women have married Negro men, and lived with them short a short time, but *white men do not marry Negro women.*

There is no evidence that either Negro men or Negro women have any desire to marry whites. Nature influences them to marry persons of their own race.

Abraham Lincoln well said *"there is a physical difference between white and black races which I believe will forever forbid the two races living together on terms of social and political equality."*

Anti-Closed Shop Law Upheld

The Nebraska State Supreme Court recently declared the Nebraska anti-closed shop constitutional amendment valid. The amendment was passed by a large majority at the 1946 Nebraska election. A union local had suspended an employee because of failure to pay dues and called upon the firm to discharge the man in line with the union contract. The company based its refusal to discharge the man on the constitutional amendment, and took its case to the Nebraska high court.

Thus one more supreme court has upheld an anti-closed shop law and denied the right of a union to say that an American citizen must be denied employment unless he joins a union and pays dues.

Up to the present time every anti-closed shop law, enacted by a state, has been held constitutional.

C. I. O. Takes A Licking

The C. I. O. really took a licking at the White Oak Cotton Mills at Greensboro, N. C.

Accompanied by a publicity campaign and statements, William Smith of California, the top C. I. O. man in North Carolina, temporarily moved his office from Charlotte to Greensboro. George Baldanzi and other top C. I. O. men took up temporary abode there.

As usual, they made loud boasts about the certainty that the C. I. O. would win the election on Jan. 28. The National Labor Relations Board supervised the election and when the voting was over announced that the employees of the White Oak Cotton Mills had rejected the C. I. O. by the overwhelming vote of 1,363 to 493.

That such a majority against the C. I. O. acquired in the face of such a concentrated drive is a remarkable indication of the lack of confidence which the mill employees have in the C. I. O. and its present leaders.

From the days of Moses and Caesar Cone and continuing under Herman Cone, the employees of the White Oak Cotton Mills have been treated fairly and have always had a wage scale above the average of the South.

They could see no reason to turn against Herman Cone and become followers of William Smith of California and George Baldanzi of Massachusetts, two rank outsiders who would profit handsomely if they could be induced to establish the C. I. O. in the White Oak Cotton Mills.

We have little doubt that the election would have been closer if William Smith and George Baldazi had stayed away from Greensboro.

North Carolina Textile Foundation, Inc.

Donations to the North Carolina Textile Foundation, Inc., to date, amount to $986,153.67, which is only $13,846.33 short of $1,000,000.

The largest of the recent donations was one by Neuss, Hesslein & Co. of New York, largest United States exporter of textile goods.

Their donation is large enough to provide a $2,000 per year salary supplement and enable the School of Textiles of North Carolina State College to secure an outstanding man in the field of fabric construction and manufacture.

TEXTILE INDUSTRY SCHEDULE

April 22-24—Annual convention, **AMERICAN COTTON MANUFACTURERS ASSOCIATION**, Roosevelt Hotel, New Orleans, La.

April 24—EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, N. C. State College School of Textiles, Raleigh.

April 29-May 1—Annual convention, **AMERICAN COTTON SHIPPERS ASSOCIATION**, Dallas, Tex.

May 1—PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION (includes former Gaston County Division), Charlotte, N. C.

May 3-7—INTERNATIONAL EXPOSITION OF TEXTILE MACHINERY, EQUIPMENT AND SUPPLIES, 71st Regiment Armory, 34th Street at Park Avenue, New York City.

May 5-7—Annual convention, **COTTON MANUFACTURERS ASSOCIATION OF GEORGIA**, Sheraton-Plaza and Princess Issena Hotels, Daytona Beach, Fla.

May 6-8—Annual (North Carolina) **STATEWIDE INDUSTRIAL SAFETY CONFERENCE**, Sir Walter Hotel, Raleigh, N. C.

May 7-8—Annual meeting, **LOWELL TEXTILE INSTITUTE ALUMNI ASSOCIATION**, Lowell, Mass.

May 10-14—Third annual **NATIONAL TEXTILE SEMINAR**, Shawnee Inn, Shawnee-on-Delaware, Pa.

May 13-15—Annual convention, **SOUTHERN TEXTILE ASSOCIATION**, Ocean Forest Hotel, Myrtle Beach, S. C.

May 13-15—Golden Jubilee Celebration, **NEW BEDFORD TEXTILE INSTITUTE**, New Bedford, Mass.

May 13-16—Annual outing, **CAROLINA YARN ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

May 17-22—NATIONAL COTTON WEEK.

May 20-21—Annual meeting, **SOCIETY OF PLASTICS INDUSTRY**, Atlantic City, N. J.

May 27-29—Annual convention, **TUFTED TEXTILE MANUFACTURERS ASSOCIATION**, Sheraton-Plaza Hotel, Daytona Beach, Fla.

June 18—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Ocean Forest Hotel, Myrtle Beach, S. C.

July 22-24—Ninth annual **COTTON RESEARCH CONGRESS**, Dallas, Tex.

July 24—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.

Sept. 25—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Columbus, Ga.

Sept. 27-Oct. 2—Third **NATIONAL PLASTICS EXPOSITION**, Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXHIBITION**, Textile Hall, Greenville, S. C.

Oct. 14-15—Annual meeting, **NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 20-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Sheraton-Bon Air Hotel, Augusta, Ga.

Nov. 30-Dec. 1—Annual meeting, **NATIONAL COTTON COUNCIL**, Los Angeles, Cal.

Dec. 4—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.

The regular college salary was not sufficient to attract an outstanding man, but with $2,000 per year added, it has been possible to obtain an excellent teacher.

He will be designated in the college catalogue as the "EDGAR AND EMILY HESSLEIN PROFESSOR OF FACRIC CONSTRUCTION AND MANUFACTURE," and therefore be a memorial to the man who headed Neuss, Hesslein & Co. for many years, and to his wife.

Neuss, Hesslein & Co. had been considering setting up a fund to provide scholarships, but decided that, while scholarships would help a few boys, making it possible to secure a professor of outstanding ability would insure better instruction and over a period of years benefit many thousands of textile students.

The plan they have adopted will provide a long time memorial to Edgar Hesslein and his wife and at the same time insure good instruction to students studying fabric construction and manufacture.

Being now in the position of having a total of donations which is only $13,846.33 less than $1,000,000, it is certain that the last named figure will soon be reached, but that will by no means be the top, and it is reasonably certain that the figure of $1,500,000 and possibly $2,000,000 will be reached.

The greatest influence behind increased donations is the fact that the North Carolina Textile Foundation, Inc., has already made very good use of the funds it has received.

By providing salary supplements, it has enabled the School of Textiles at North Carolina State College to secure a group of well qualified men as professors and instructors and the value of having such teachers is already being reflected in the demand for graduates of the school.

$275,000,000,000 Purchasing Power

A member of the board of governors of the Federal Reserve System recently estimated that the purchasing power now available in this country to buy the current output of goods amounts to $275,000,000,000, compared with about $80,000,000,000 in 1940.

An increase from $80,000,000,000 to $275,000,000,000 in the annual purchasing power of the American people should be a tremendous factor in sustaining a market for products of our factories.

There will probably be some decline from the top figure given above but there is no reason to believe that the bottom figure will be seen again for many years.

Accepting A Responsibility

We would like to call our readers' attention to the advertisement of Pyrene Mfg. Co. which appears on Page 16 of this issue. Note that this company has found out that a number of its fire extinguishers have gone bad as the result of inferior chemicals in them.

Pyrene is calling in all extinguishers which bear certain serial numbers, and intends to replace them. It requires no great imagination to realize that this will cost the firm a great deal of money. Pyrene, however, feels a responsibility to its customers and public safety, and deserves commendation for it.

THEN, AS NOW, **COLOR** SOLD TEXTILES

The crusades, originating in the twelfth century to recapture the Holy Land from the Moslems, were a military failure, but the West was stimulated by contact with a cultured and artistic civilization. Some of the most prized trophies which the feudal lords stole or bartered were the exquisite oriental rugs, woven from the finest of dyed yarns. Then, as now, color sold textiles.

Franklin Process

LARGEST PACKAGE DYERS IN THE WORLD

PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA
New York Representative, 40 Worth St.

During the war, The Springs Cotton Mills developed a special cotton fabric which was woven to be water repellent and wind resistant, and then made into ski pants and Arctic uniforms.

This fabric is now available to the false bottom and bust bucket business, and if you want protection from a sudden draft on a windy corner, look for the SPRINGMAID label on the bottom of your trade-mark.

Known to the trade as *Kerbra* combed broadcloth, this fabric is now finished 37" wide, count approximately 152 x 68, and weight of about 4 oz. to the yard. The fabric is sold peach, blush, nude, and white by

SPRINGS MILLS • 200 CHURCH STREET • NEW YORK 13, NEW YORK

CHICAGO DALLAS LOS ANGELES

Look for this ad in Esquire, Vogue, Charm and Mademoiselle, in addition to leading trade magazines throughout the U. S.

ABP textile bulletin ABC

VOL. 74 APRIL, 1948 NO. 4

The Research Approach To Training

By DR. WILLIAM McGEHEE, Director of Personnel Research and Training
Fieldcrest Mills, Division of Marshall Field & Co., Spray, N. C.

MY topic may seem academic to those of you who are plagued with problems of training which require immediate answers. It even may seem presumptious to those of you who have had many more years of experience in the field of industrial training than I can boast. I have reached, however, two conclusions, based on both practical experience in and study of industrial training, which lead me to a willing discussion of the subject, "The Research Approach to Training." First, I am convinced that, with few and infrequent exceptions, little use has been made of a research approach in the development of industrial training programs in America; second, a research approach to training in American industry will pay both immediate and long-term dividends to those who use it.

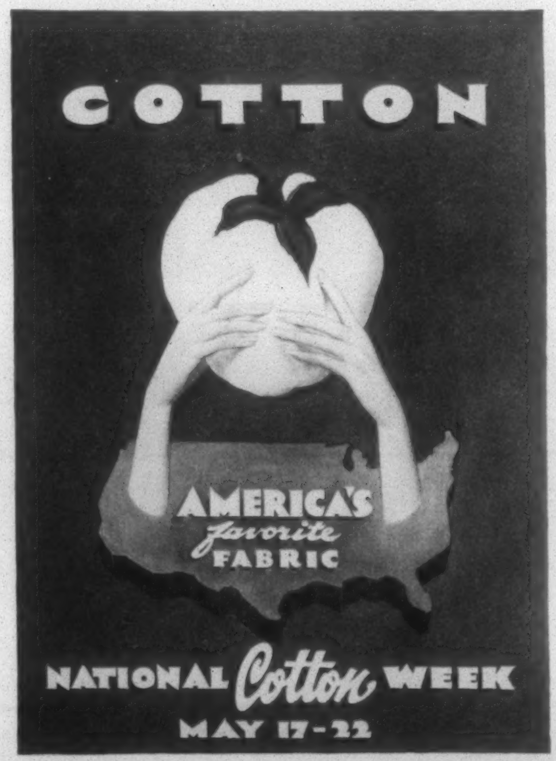
In 1935, a well-informed author of a text in industrial psychology dismissed the topic of industrial training with the following footnote: "The topic of industrial training will not be considered in this volume. Little evidence is available concerning training in industry. For dependable information on training in general, the reader may turn to any of the better-documented textbooks of educational psychology." Certainly at that time, there was a large body of writings on industrial training. The majority of these contained descriptions of various forms of training, or were manuals for organizing training programs and special pleas for some panacea for industrial training problems. This author, however, concludes that none of these writings contained dependable information on which a training director could chart safely his program. In other words, not enough carefully controlled research on industrial training had been done at that time to justify a chapter on the subject in an exacting textbook. This writer further suggests that the practical man of training would have to look for guidance, in planning his program, either in industrial folklore or in interpolation into industrial situations research data on training gathered from the study of the white rat or the college sophomore. Either procedure could produce unfortunate outcomes.

Many of you will agree with this footnote writer that little dependable data on industrial training were available over a decade ago. However, the last ten years have witnessed a vast increase in organized industrial training programs, sired in part by the war and wet-nursed by Training-Within-Industry. Certainly out of these activities, research data are available in quantity for the training man to use in planning his particular program. I have searched through various textbooks recently published in the fields of personnel administration, industrial psychology, and industrial training for research data on many of the problems which confronted me as director of training for my organization. I have read, as much as I can, current journals and magazines which carry articles on industrial training. I must confess that if the authors had used as a criterion for inclusion in their books only information on training based on dependable research, they would have used the footnote of my 1935 writer. In the main, those writing on the subject of industrial training simply describe without evaluating; or, if they happen to be psychologists, they interpolated from the learning of the goldfish to the learning process of Rosie the Riveter. Certain hopeful exceptions should be noted. Research reports, sometimes irritatingly vague, have appeared both in textbooks and current periodicals substantiating the value of organized training over unorganized training, showing the effect of training instructors on learner outcomes, and depicting methods of evaluating the outcomes of training. Yet, if you are a training director, you will still have to use folklore in solving your specific problems, such as, whether to demand that a learner concentrate on speed or accuracy initially in learning a task which places a premium on both speed and accuracy.

There is little dependable research data published on industrial training. By dependable research data, I mean conclusions concerning a problem which are based on investigations which control, statistically or otherwise, all variables. This, of course, is not conclusive evidence that training men are not using a research approach. My contacts with industrial training, other than in my own organization, are not as broad as I would like. Yet, these contacts have given me little evidence that an extensive use of research techniques is being made in industrial training. Some training men, even as you and I, are concerned with collecting data to show that our training programs saved management more money than they cost them. Most of us, however, are so concerned with the immediate problems of organizing supervisory training or instructing 50 weavers that we neither plan nor do the research necessary to determine the best methods for securing our desired outcomes. Yet, a research approach to training requires merely that in planning our training, we anticipate problems on which we require dependable information and so plan our programs that we may secure these data. Research in training does not mean that we have to cease training to get research data but that we so control our training that research data are secured as we train. These data will be, as I have said, of immense practical value in solving our training problems as they arise in the future. This statement leads naturally to a discussion of my second point.

Recently, we have been taking a good look at the methods and techniques we are using in training our rank-and-file employees in our mills. I am convinced that it is at this level that a formal training program must rise or fall. Training methods which can reduce costs to any appreciable amount represent real savings in the manufacturing costs of the finished article. Certainly the methods used in training should be tested as exhaustively as a newly-designed piece of machinery. Just what are some of the problems confronting the training director in planning with line personnel the training of rank-and-file employees? Can these problems be attacked from a research point of view without undue disruption of the training program? I believe they can.

First, let us take a problem I raised earlier. Most jobs in industry place premium both on speed and accuracy. Evidence as to which should be stressed or whether both should be stressed initially to secure the most adequate learning is practically non-existent for industrial jobs. It would be comparatively easy to plan training, of say cloth inspectors, in such a way that one group would emphasize speed, another accuracy, and a third both aspects in initial training. The groups would have to be matched, actually or statistically, to secure dependable results. Large groups would not be required to secure reasonably dependable results if the data collected were treated with small sample statistics which have had such a marked development in the last several years. There would be no disruption of the training program, and reliable evidence for the training of future inspectors would be available.

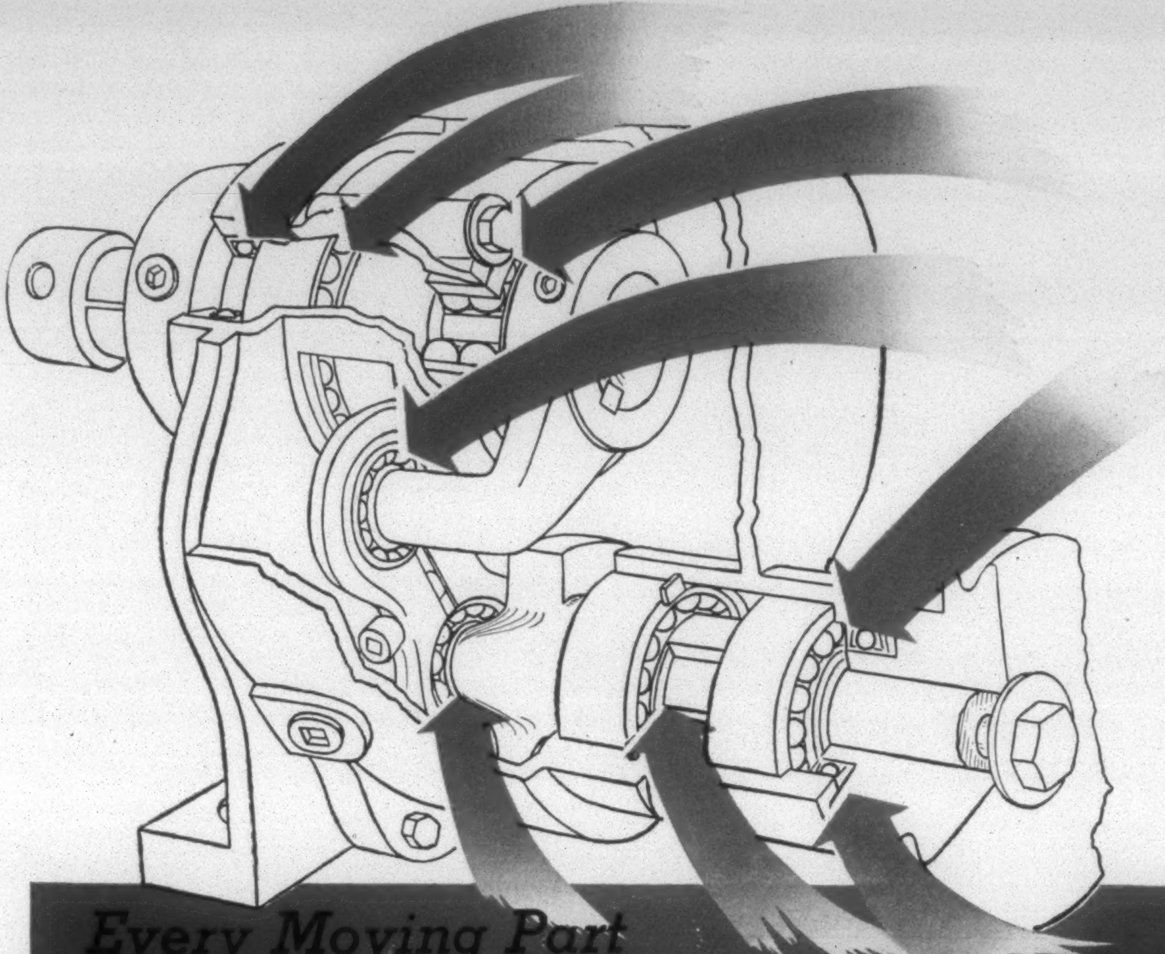


"Cotton—America's Favorite Fabric" is the slogan highlighted in these three-color posters now being prepared for distribution to stores in connection with the observance of National Cotton Week, May 17-22. More than 350,000 of these posters are being mailed out. In addition to retail outlets, they will be received by various civic organizations, wholesalers, railways and industrial firms which in their normal operations use large amounts of cotton. Judging from requests for promotional material, Cotton Week will be more widely observed this year than at any time since 1939.

One of the problems which constantly arises in training for industrial jobs is the point at which diminishing returns from training begin. The examination of learning curves from many activities show them to be negatively accelerated, i.e., smaller amounts learned with each practice period. For example, if a group of weavers reach 75 per cent of their maximum efficiency in six months and improve only by small increments each month thereafter, at what point should formal training cease? Securing data to determine an answer to this problem need not interrupt current training if any sort of decent records have been kept on the training of learners in the past. It is simply a matter of going to production or payroll records and developing learning curves for the job in question. Formal training should cease when the costs of training exceed the loss resulting from discontinuing formal training.

Another problem which is ever present in training industrial workers is that of how to space practice. If we had eight hours in which to teach a given task, the practice on this task would be more effective under the majority of conditions if we broke the eight hours up into some arrangement involving practice and non-practice rather than spending the entire eight hours in practice. I know that in an industrial situation there are practical administrative problems involved in spacing practice. We pay the learner for eight hours of work, and we kid ourselves that we get this full eight hours. Yet, many jobs in industry require different activities which can be taught separately. Careful planning of the training program would provide for the advantages of spaced practice without rendering the trainee idle for any appreciable part of the day. However, before you try to rush out and institute spaced practice in your training routines, let me caution you that we have no data on its effectiveness in an industrial situation. Many conditions are related to the effect of spaced practice. These conditions must be studied for each job. At the present time, we are in the initial stages of trying out spaced practice in the vestibule period of one of our more complicated jobs. We have not gone far enough yet to get dependable results, but the increased interest and motivation of the trainees involved is a favorable sign.

If a trainee has the necessary aptitude to learn a job, his speed of learning and ultimate level of efficiency are related directly to the effort he expends. Research data on non-industrial training have stressed repeatedly the importance of effort or motivation in learning. We have little or no dependable information on the value of specific motivational techniques for facilitating industrial training. Even the data from academic studies are not always clear-cut as to the value of such devices as rivalry, knowledge of results, praise and reproof. We have used, in certain of our training, weekly conferences between the foremen, the trainee and the learner for the purpose of giving the trainee specific information about his job progress. Each of these conferences costs us at least $3 in terms of wages alone. Do we get value received? Recently, we have instituted these conferences in a department where they had not been used before and believe that we will be able to evaluate their effect on the trainees' rate of learning. If we can show that these conferences result in real increase in learning



Every Moving Part

ENCASED IN BALL BEARINGS!

Southern States Type C Ball Bearing Comb Box

This efficient Comb Box reduces friction and wear. Every moving part is encased in standard heavy duty Ball Bearings. The only parts that wear, these Bearings may be replaced at less than the cost of replacing moving parts in your present box, giving you a virtually new box.

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Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South rate, we will not have too much trouble introducing the procedure in other departments. This problem of the effect of knowledge on learner progress is only one of many in the area of motivation in industrial training which requires careful research investigations.

We have heard much about visual aids in the instruction of employees. Visual aid equipment is expensive, requires careful maintenance, and usually specialized personnel to operate it effectively. Just how valuable are these aids in instructing rank-and-file workers? Do they pay for their use? Are they equally effective in training workers on different jobs in your plants? Frankly, I do not know, and I do not believe that many of you know the answers to these questions. Again, this is the type of problem in training which lends itself to the research approach with the possibility of securing dependable evidence which will represent real dollar and cents savings.

Many of us are concerned with the attitudes of our employees both toward our company and toward basic economic and political problems. We find evidences of undesirable attitudes in lowered quantity and quality of production, absenteeism, general indifference toward work, and overt disregard for authority. Attitudes are not innate but are a product of training. We indicate that we are well aware of this by the numerous training methods we are using to modify our workers' attitudes. Induction programs, employee meetings, radio programs, company newspapers, letters to employees, simplified statements of the company's financial transactions, and many other techniques are being used to modify and influence employee attitudes. Just how effective are these techniques? Remember that they are techniques conceived usually by individuals who, try as they might, cannot have completely the point of view of the rank-and-file workers. Here again indications of the effectiveness of these methods must be sought through a research approach. Each time we attempt some form of attitude modification, we should attempt to measure as accurately as possible the results. Many techniques are available with opinion polls being perhaps the most popular and, in some ways, the easiest to use and misuse. "Canned" opinion polls rarely achieve the results desired because they usually do not get to the heart of a problem. Opinion polls should be tailored to get specific answers as to the effect of a specific effort on the part of management to modify employees' attitudes if we are to get full value from the use of this promising research technique.

A new "Thick and Thin" Du Pont rayon yarn brings unusual textures to these different types of decorative fabrics. The chair is upholstered in a yarn-dyed striped satin which combines the uneven rayon yarn with cotton. The damask at far left attains surface interest through use of the irregular yarn with uniform viscose rayon yarn. Next are two taffetas, in plain and color co-ordinated plaid, made with "Thick and Thin" rayon filling and cotton warp. At right, a rayon-and-cotton twill achieves a two-toned effect with irregular vertical lines breaking up the diagonal weave.

Opinion polls are by no means the only method for evaluating the effectiveness of training endeavors, formal or otherwise, in shaping employee attitudes. Such methods of checking the results of training as decrease in breakage or use of consumable supplies, reduction in absenteeism and labor turnover are equally applicable to evaluating programs of training directed toward modification of employee attitudes.

One other aspect of training requires a research approach. The majority of you are convinced that we must design and carry out competent programs for training our supervisory forces. Particularly, we are concerned with training our first-line supervisors: the foremen, the assistant foremen, and the section leaders. The area of supervisory training requires careful and thorough investigation. Supervisory training costs money in terms of personnel involved even if done efficiently; it costs even more when done ineffectively. The starting point of any supervisory training program is determining needs, not just general needs, but the needs of the specific supervisors involved. I have a definite quarrel with so-called packaged or canned plans of training, usually brought in from the outside, on the score that they rarely meet the needs of the supervisors in a specific mill or plant. One obvious way of getting at training needs is the much misused questionnaire technique. We have used this method in our organization but have supplemented it with a careful study of duties required of our supervisors and the study of specific conditions, such as the misuse of formal warnings, which indicated training needs. We do not plan to make one survey of training needs at this level and stop.

Now let me sum up briefly what I have tried to say. I am not condemning what has been done in the past in the development of training in American industry. There are many fine training programs throughout industry today which have developed without extensive use of research or approach. What I am saying is that we uncritically have taken into our programs methods which may be inefficient and short-sighted. If industrial training is to continue to play an important role in American industry, we must critically evaluate the methods we are now using. This critical evaluation must take the form of securing data under conditions so controlled that the conclusions we draw from these data are valid and reliable. The era of debate regarding training methods has passed. The training director who uses dependable evidence in planning his programs in the future will survive in the not too lush days we all know are coming.

This is the first published abstract of Dr. McGehee's paper, which was delivered in February before the Mid-Winter Personnel Conference sponsored by the American Management Association.

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Latest Data on Shuttles
#4
Read and Retain

Dear Son—

YOUR letter was a bit of shock to me. Of course it is natural for you to become discouraged, but you are badly mistaken when you say the industry of "humming spindles" and "clacking looms" is a humdrum affair. Where is your imagination. Are you losing it?

Why, Son, I feel that the textile industry is an industry that is entirely devoted to better living. Now what do we mean by "better living?" Better living is anything that contributes to the improvement of the spiritual and cultural life of man. Or we may say, that which contributes to man's body comforts, his mental peace of mind and his spiritual happiness. We contend that from the beginning of mankind that textiles have made these contributions.

If you remember the bible stories you learned as a child, you will recall that Eve used fig leaves to make herself a dress. This dress she donned to give herself courage to face a world of hunger, cold, sin and toil, when she and Adam left the Garden of Eden. So does today's housewife put on a brightly colored dress in order to lift her morale above the everyday routine household chores.

So does the career girl don her smartly-tailored suit to give her the necessary confidence for that all important business engagement. Also well-shaped legs cased in the sheerest of nylons are oft' times displayed for the appreciative male eye. All are textiles used to convey confidence and to aid in securing a job, contract, or commitment that will assist the lady in receiving the means by which she can improve her personal comfort, or secure the means by which she will have a richer and fuller life.

Man is also like woman in the usage of the various forms and varieties of textiles. He uses textiles in his business engagements; he preens himself to win a mate, impress the voters, sway a jury as the occasion calls for. Can any man deny that he has often used a well-starched shirt, a well-pressed suit with a carefully folded handkerchief in the breast pocket, along with a carefully chosen necktie to impress a client, employer or girl friend? All of these are textiles aiding man to enjoy a fuller and richer life.

Son, call upon your imagination and study how man has developed the art of textiles. You will find this study an interesting and thrilling experience.

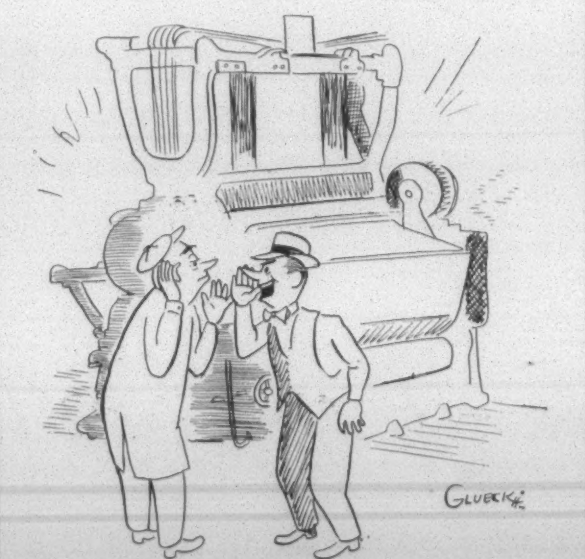
Think back to the first primitive man who twisted two vines together to make cord that would allow him to bind a sharp, pointed stone to a handle; thus forming a club, which gave this primitive man a more powerful weapon to deal with the wild beasts and his enemies. He must have been heralded as the genius of his day. The man who found how to use this cord to bend a piece of wood, which would give him power to speed its arrow on its swift, deadly, but silent flight into the breast of his enemy, must have been known as the Edison of his time. Certainly this simple use of textiles gave him the necessary protection which enabled him to travel in enemy lands. Keep in mind that the power which this cord gave him remained the greatest discovery for man's protection until passing cycles of time brought the discovery of metals and gunpowder.

You may rest assured that this early user of textiles, a "Cord User," was not hesitant in using the cord as the means of transmitting power to a wooden spindle which enabled him to start a fire. As a Boy Scout, you knew this procedure as the "bow method" of starting a fire. It did not take him long to see the possibilities of using these strands bound together in the form of a net as an improved method of catching fish. This in turn increased his food supply, which gave him more time for thinking and further enjoyment of his status. I cannot believe that he was long in developing the use of this cord to snare and hold wild animals until he could tame them as beasts of burden. As soon as he had tamed these animals, he must have learned how to take strips of bark and weave them into baskets to increase the load he could place upon his carrier.

Somewhere along the line, probably it was the early woman, someone discovered that various roots and berries gave stain or color to basket or body, and the cheerful note of color was added to life—taking away a small bit of drabness of early primitive living.

Perry Walton in his book, *The Story of Textiles,* says "A bit of cloth—whether it be woolen or cotton, linen or silk—is one of the most interesting evidences of man's climb from the days of savagery to 20th Century civilization." He goes on to say, "As one notes how finely spun and how intrically woven are the threads and how beautiful often is the design, the wonder grows that a piece of cloth can be so dextrously fashioned." And yet as one reads of the painstaking efforts spread over many centuries which man has put forth to attain perfection in spinning, weaving and dyeing, the wonder fades in admiration of the infinite pains that he has taken to perfect the art. All of this an art dedicated to better living and better comforts of men and women.

You have only to consider the average man or woman on the streets, in the homes and in the churches, to realize how this huge industry ministers to their needs and comforts.



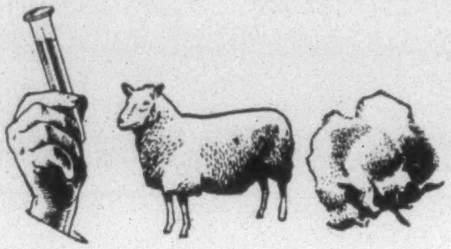
"I said, 'In case of any trouble the loom has a little tinkling bell signal.' Listen for it."

Man's first contact with a manufactured article is his pants of the three-cornered style. If these pants were not made of a fabric that contributed to our comfort, we quickly expressed our disapproval before we were yet able to talk. White-clad doctors and nurses brought us into this world and tenderly laid us between soft, soothing sheets. As we grew up, textiles shielded our bodies from rain, cold, snow and protected our tender skins from sharp burrs and thorns.

We bring into our homes sugar, flour, fruits and other necessities wrapped in textiles. And in these homes we have added curtains, draperies, towels, mattresses, spreads, rugs and carpets. We spend restful hours sometimes reading a book bound in cloth or dining at a table covered with shining oilcloth, or maybe the finest linens or damasks. Upon finishing the meal, we return to our textile upholstered chair to relax in the soft glow of our favorite lamp, the rays of which are softened by a fine decorative shade made from finely-woven textiles.

Then what is more refreshing than to clothe oneself in broadcloth pajamas and stretch between the soothing surfaces of freshly laundered percale sheets for sleep and rest? With morning and the new day, it is the bath and the brisk towel rub-down that prepares us for the events ahead; then striding forth clad in textiles to meet the occasion of the day.

It is not only the songs of Easter Morn, the blooming flowers, the budding trees and the songs of the birds that tell us Spring is here, but just as forcibly we are told by the bright colors and designs of the textiles that we see in the Easter Parade. Then, too, think of the enchantment that surrounds the bride clothed in folds of delicate laces and veiled in the sheerest of fabrics; also, the traditional blue that she must wear, and the quiet, somber, formal clothes of the groom as he stands waiting at the altar.



So is each day of our lives, each important occasion that we celebrate even to the end when our bodies, stilled in death and wrapped in a shroud laid on the soft folds of silk, textiles have protected, aided and enriched our lives and souls.

Yes, Son, you are working in an industry devoted to better living. It is no mean art to convert those dirty, unsightly bales of cotton into the beautiful fabrics we see every day. Mastery of the art does not come overnight. It takes time, experience, and above all, hard work.

Since the appearance of the first letter to "Dear Son" (July 15, 1947, issue of TEXTILE BULLETIN), there have been a number of good-natured inquiries as to the young man's progress. The author, a popular and widely-known mill superintendent, says that "the student is having the customary experience adjusting himself to the world off the college campus. He is finding that gaining the necessary practical experience is not all 'rah, rah!' He is finding that life is real, and is awakening slowly (cruelly perhaps) but surely to the fact that he is not going to revolutionize the industry overnight." The accompanying letter is in reply to "Son's" claim that there is no romance in the textile industry.

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Planning An Employee Relations Program

By L. E. RICHARDS, Consultant, Spray (N.C.) Cotton Mills

IN planning an employee relations program it should be realized that proper recognition has been denied the textile worker for many years, not because he has not deserved it, but primarily because familiarity and constant association in a textile community takes its toll of the worker's obvious merits. It is easy for us in the textile industry to see the importance of the man in the steel industry, for he helps in the production of the automobile, which gives us so much pleasure; to see how important the paper maker is, for he makes paper for printed material and the dollars which buy us things; to see the value of the farmer, for he produces our food. There always is glamour in the other fellow's job.

The Spray Cotton Mills management believes that it has found one medium for bringing to its employees a realization that they are important—important at their work, in their communities and in their church affairs.

In order to develop job pride, a sense of importance and to set up a goal for all employees, the personnel of Spray Cotton Mills (with management and office workers not allowed to vote) ballotted to choose a person they considered the "Solid American Typical Textile Employee." They picked a doffer, Obie Earles, a man who has worked 22 years in the industry. He has been a faithful and steady worker, for in the last 14 years he has not "laid out" a day on his own accord. He is a member, deacon and secretary of the Sunday School of the Church of Brethren. He also is interested in civic affairs.

Here is a character sketch of the man chosen for this distinction. Dark eyes peer out from the face of this intense, good-looking man. Intenseness characterizes this man; he is forceful in everything he does, and is one of the top producers in the mill. He has a ready smile that results from a happy and contented home life, pride in his work and pride in his family. Mr. Earles has a talented and charming wife, the former Beatrice Pratt, who teaches Sunday School, and their daughter Barbara Jean, 13, is both gifted and attractive, does well in her school and music studies. They own an attractive home on Kings Mill Road in the adjoining town of Leaksville, which is tastefully furnished, livable and comfortable.

Obie Earles deserves this "Solid American, Typical Textile Employee" award, and has been presented a loving cup by the Friendship Club of Spray Cotton Mills. He believes that the textile worker can well be proud of his chosen vocation, since his wages, working conditions, home and community are equal to or perhaps better than those of workers in other fields.

Obie Earles and his wife and daughter live in an attractive home. At top is a view of the house front; they are gathered around the dining room table below.

Here Obie Earles receives the loving cup voted to him by fellow employees at Spray Cotton Mills.

Of course, the contest mentioned above is only one meager way to give recognition. Recognition is of such importance to man that it is rated by psychologists as a fundamental want. If this be true, and we know it is, modern industry must utilize every means at its command to satisfy this want. Some industries have failed their supervisory force because they have neglected to furnish training to supervisors which will give them an understanding of themselves and of the people who work for them. Training itself is a means of recognition for the supervisor, and if in turn this training provides knowledge and understanding of people it readily can serve a two-fold purpose. I am not advocating a course in psychology, for that is not what superintendents, overseers and second hands want. They want basic, factual material that will help them in their daily contacts, and give them ways and means to better their relations with the employees for whose efforts they are responsible. The supervisors want to know about such things as are discussed in this article, and how they too can cater to this inner urge of mankind; both top management and the supervisory force should become familiar with the art of giving recognition.

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MAN-BUILDING POWERS

By W. M. McLAURINE

SOME time ago, I heard a speech on the above subject and it caused me to desire to enlarge upon the theme, believing there may be immediate values to the textile industry in exploring some ideas of this type today. While the textile industry has made great progress during its late years—so much that it is almost unbelieveable—yet it is always necessary to keep some constructive ideas at work to prevent coasting.

During the war, when manpower was so scarce, the War Manpower Commission developed various courses known as the Training-Within-Industry program. They were short intensive courses for foremen and sub-executives in the intelligent management of men, job and job relation training. The facts of life regarding men and jobs were pulled out logically, and forcefully, and intensively given to thousands of groups of people in all types of industries, including the textile industry. It was a fine job.

These courses with their directness and logic played a great part in enabling industry to meet its obligations. They gave to industry a momentum that still carries it in these post-war days.

Some industries are enlarging the work and still carry on, realizing the great man-building power that it gave and can still give. Others think that the war and its demands are over and that the status quo can now be employed. The purpose of this article is to stimulate the indifferent with the fact that man-building powers in the textile industry do not develop without motivation and direction. With this idea in mind, the writer has thought that a series of articles on the subject of "Man-Building Powers" in the textile industry might be of value.

This series of of articles will be an attempt to answer the question, "What Can The Textile Industry Do To Develop Its Man-Building Powers?" In attempting to answer this question in this article, the writer will deal with generalities, while in those that follow there will be specific problems, analyses and suggested solutions. There will be no attempt to work out foolproof ideas, however, the suggestions will be stimulating and can perhaps help the personnel manager in making out such courses as may specifically apply to his own organization.

Now, answering our question in general terms we shall state:

(1) Every textile organization should have a careful and intelligent employment program. It should know job analyses and manpower qualifications. It should have, in so far as practicable, progressive job employment. There should be no blind alleys. There should be avenues for progress.

(2) This means that there should be an analysis of job relations and a knowledge of manpower requirements. The worker should clearly understand not only his job and job relationship, but he should be thoroughly informed about all policies of the company, both externally and internally.

(3) This means that within the industry there must be an educational department and a sensible induction policy thus giving to the worker all knowledge that will enable him to fit properly within the organization. If the worker needs special training or extra training, there should be some specific provision for such and properly functioning.

(4) All workers should be impressed with the value of such care and instruction and no better way to find this out is known other than that the workers and supervisory force with whom he is associated preach and practice these policies. This means that the supervisory force understands and believes in company policies and co-operates fully in their execution.

(5) Workers must be impressed with the fact that there are two kinds of promotion available—horizontal, which is possible for every man, and vertical, which is not always possible for all.

(6) Workers should know and understand their jobs—human and physical—in detail, and so must the supervisors. The problem of supervision will be dealt with rather completely because in this field many grievances arise.

(7) Workers must be impressed with the idea of thrift and frugality along with their economic and productive policies. The human side must always be evident.

(8) Safety policies and their reasons must be thoroughly taught and applied with a co-operative appreciation for same.

(9) The causes for labor turnover—its costs and its cures.

(10) Creating interest on the job.

(11) The follow-up and rating workers.

(12) Records and reports.

(13) Absenteeism and tardiness.

(14) Leadership qualities and powers.

(15) Suggestions.

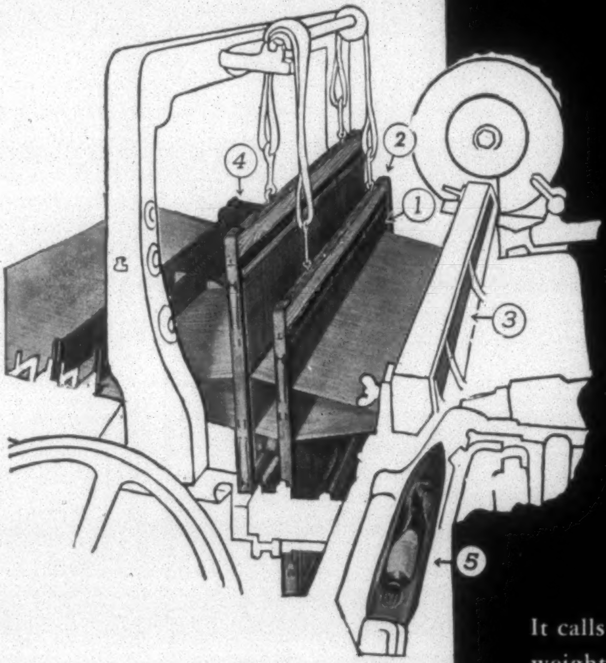
What are some of the facts dealing with these topics? These topics and many more should be carefully worked out by the personnel department. They should be worked out not theoretically, but from actual experience, and when necessary for improvement should be modified.

Employees should not feel that some ironclad and inelastic system has been superimposed upon them. Employees must feel that they and the employers have common and co-operative interests in the social and economic progress of that particular industrial unit.

The employees must be assured that management is unselfishly taking care of their physical and mental well-being. Living and working conditions must be the best possible within the financial ability of the organization and should be maintained on such a basis that they will manifest themselves in the social and economic outlook of the worker as he leaves the plant or village and takes his place in the larger social group. Pride is a good word in man-building power—pride of personality—pride of organization.

This article sets the trend for future articles.

Mr. McLaurine is well-known throughout the textile industry as the retired secretary-treasurer of the American Cotton Manufacturers Association and a contributor to various periodicals. He states that the current series of articles, of which this is the first installment, will continue "until I run out of breath."



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taking place
in Weaving

and especially in connection with the many new synthetic yarns, such as Saran, Vinyon, Velon, etc.,

call for the most experienced and careful thought to be given

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Opening, Picking, Carding & Spinning

Evaluating The Results Of Textile Tests

By JOB J. MILLS, Consulting Engineer, Greenville, S. C.

OUR cotton mills no longer belong to a one-fiber industry, or to one in which a single system of manufacture is universally employed. Nowadays, we are concerned with many types of synthetic, animal and vegetable fibers in addition to cotton. All of these fibers do not have the same properties. They do not behave alike under mill conditions, or respond in a similar manner to a given sequence of machinery. They are being furnished in many diameters and lengths, and we are mixing them in complex blends.

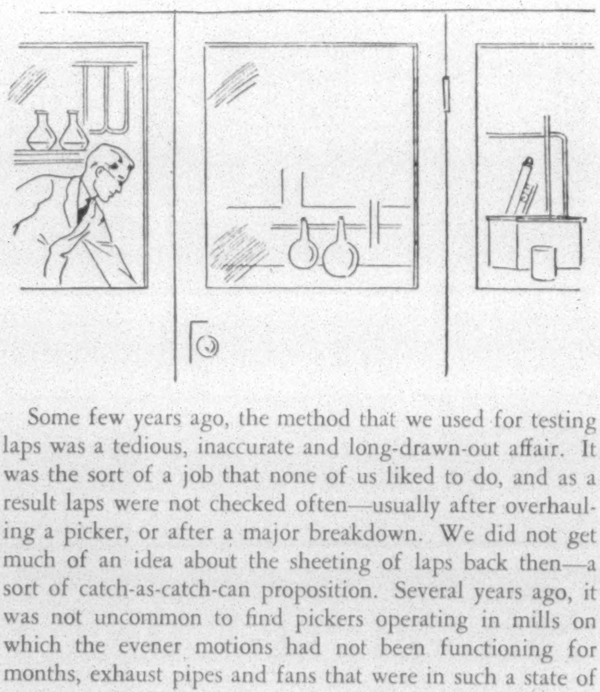
Many of us have made modifications in some of our existing machines in order to produce certain kinds of synthetic and blended yarns. And several of our straight-line cotton mills have installed new units of special equipment and are spinning yarns from longer staple lengths that were processed entirely on the worsted system until recently. The possibility of our present wide range of fibers is almost limitless, and a demand for new and better fabrics is being made of us every day.

The invasion of new fibers into our mills, together with the alteration of some of our machines that has followed, while of vast importance, is by no means our most important progress. Our most important progress today is the open-mindedness with which we regard the needs of our industry—our realization that well-organized testing procedure—the basis of research, development and products control—is essential to the prosperity of our mills.

Many of our larger mills now have adequately equipped and well-staffed laboratories that function as a service department for production. While this service department function is good within itself, it is not enough, in my opinion, if we take full advantage of the offerings of our laboratories. I am of the belief that our maximum benefit can be derived from testing procedure only if we operating men and our laboratory technicians tackle our problems as a hand-in-glove proposition. I believe that it is equally important for our technicians and development men to understand manufacturing principles, and for us, as production men, to take an active interest in our laboratories and know how to evaluate the test results that are handed to us. We cannot afford to look upon test reports as pieces of paper with little meaning. They are records of performance that not only serve as an index for what we are doing, but also they reflect trends that guide us to improvements. These trends do not appear overnight. They arise through continual, long-range test investigations.

Looking again at the fibers we spin, we have definite information regarding the chemical properties of most of them and we have some suspicions what a few of their physical properties mean in terms of manufacture. Yet, actually, we know little about the relationship of length, denier, and strength of fibers and what bearing these qualities have on carding and drafting. And still more important, we do not know how to take full advantage of fiber properties in the cloth we make from them.

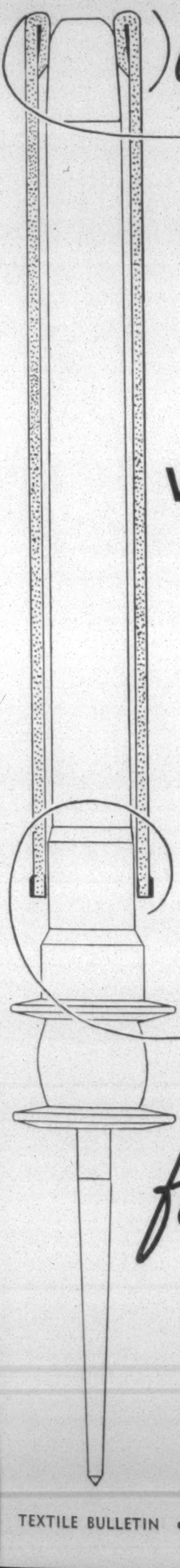
We now have instruments for accurately measuring the strength, fineness and length of fiber. And there is no small likelihood that we shall be able to work out ratios between fiber properties and translate them into better yarn and cloth. In addition to the research value of these fiber testing instruments, they have applications to the practical side of our work. For instance, they will give us more information about the staple characteristics of the waste we make at some of our machines. They are means by which we may find out why the toppings on some of our cards are rich in spinnable staple and some carry a low percentage, using the same stock and settings.



Some few years ago, the method that we used for testing laps was a tedious, inaccurate and long-drawn-out affair. It was the sort of a job that none of us liked to do, and as a result laps were not checked often—usually after overhauling a picker, or after a major breakdown. We did not get much of an idea about the sheeting of laps back then—a sort of catch-as-catch-can proposition. Several years ago, it was not uncommon to find pickers operating in mills on which the evener motions had not been functioning for months, exhaust pipes and fans that were in such a state of maintenance that uniform screening was impossible, and laps that varied as much as four ounces per yard. Before the lap meter came to our mills, laps really got bad before they were caught, and in many cases, they were not caught at the pickers. Not too infrequently, our picker trouble got into the spinning room before it was detected.

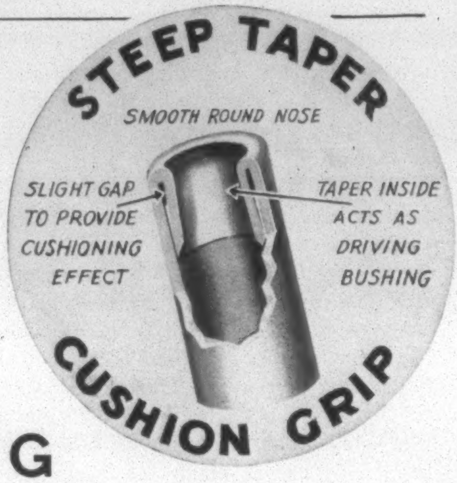
The lap meter that we use today to test our laps has aided us materially in the control of the counts in our mills. This machine unrolls a lap, cuts off one-yard lengths, and deposits them on precision built scales. In addition to allowing us to accurately weigh a complete lap, yard for yard, in a few minutes, the lap meter permits us to observe the sheeting of

Only One Point of Contact



SONOCO

STRAIGHT SIDE
WARP SPINNING
BOBBIN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SMOOTH ROUND NOSE
SLIGHT GAP TO PROVIDE CUSHIONING EFFECT
TAPER INSIDE ACTS AS DRIVING BUSHING
CUSHION GRIP

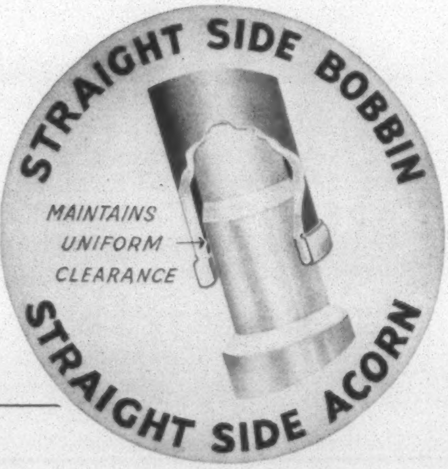
The spindle top fits the "cushion grip" with a gentle squeeze to make top-drive contact, which breaks sharp and easy without drag or pull in doffing.

The SONOCO Straight Side Warp Spinning Bobbin represents the greatest improvement in warp spinning to be made in recent years . . .

Because the parallel outside surface of the SONOCO Bobbin provides more even tension from top to bottom in spinning . . .

Because the parallel smooth surface of the SONOCO Bobbin permits higher speed delivery on spooler and . . .

Because the principle of a straight side bobbin fitting a straight side spindle acorn without contact is fundamentally correct design.



for Easier Doffing

Regardless of seating position, the SONOCO Warp Spinning Bobbin cannot bind or make drive contact with spindle at base — because bobbin has straight sides and spindle acorn is *not* tapered . . . Thus *uniformly* easy doffing is a fact with SONOCO Bobbins.

SONOCO PRODUCTS COMPANY

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DEPENDABLE SOURCE OF SUPPLY

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each yard as it passes between the unrolling mechanism and weighing tray. We have long since been aware that the evenness of the sheeting of our laps is just as important as maintaining close weight tolerances. This machine provides us with means of evaluating both of these. It would be nothing short of a nightmare for us to attempt to operate a modernly-equipped plant with abbreviated processes, without the aid of the lap meter.

The graphic sliver tester is another instrument that is of common use in our mills. This machine gives us an index of the variation that exists in the sliver and roving. It operates on the principle of subjecting a mass of fibers to pressure between two revolving wheels, one of which is free to move in the vertical plane, and recording the up and down movement of this wheel as the sample is being passed through the instrument. There are two sets of grooves on the revolving wheels furnished with the sliver tester; one being one-eighth of an inch wide (for sliver) and the other being one-sixteenth of an inch wide (for roving). The pressures at which sliver and roving are subjected in these revolving grooved wheels are approximately 1,600 and 2,500 pounds per square inch, respectively.

The horizontal lines on the graph paper used with this instrument are spaced at one-tenth of an inch intervals, each of which represents one one-thousandth of an inch of compression difference between the faces of the grooved wheels. In operating the sliver tester, the sample is placed between the faces of the grooved wheels and the recording pen is adjusted to the center or zero line on the graph paper. The distance between the faces of the grooved wheels, at the starting point, is given by an index rack arrangement located at the pivot point on the lever arm on which the recording pen is mounted. The percentage of variation in the test sample is determined by dividing the vertical movement of the recording pen by the distance between the faces of the grooved wheels when the recording pen is adjusted at the center or zero line. For example, let us assume that the distance between the faces of the grooved wheels in testing a sliver were found to be 50 one-thousandths when the recording pen has been adjusted. Let us now assume that the vertical movement of the recording pen has been three spaces (three one-thousandths) below and five spaces (five one-thousandths) above the center line. Therefore, the percentage of variation would be eight one-thousandths divided by 50 one-thousandths; namely, 16 per cent.

The sliver tester is arranged with two speeds—one where the graph paper travels inch for inch with the test sample, and another where it travels only three inches for every yard of the sample being tested. Those of us who have used this instrument extensively realize that graphs plotted on a given sample at these two speeds do not show the same degree of variation. As a result of this difference, some of us have become inclined to feel that the instrument does not offer much. The fact is that the graphic sliver tester has already done a great deal in aiding us to dig deeper into some of our questions.

We learned by hard experience that the breaking strength of our yarn increased, and the ends down at our spinning frames reduced, when we used lighter sliver. The sliver tester verified for us that lighter sliver had less variation inch to inch than heavier sliver. It showed us that the variation found in heavier sliver increased in the drafting mechanisms of our drawing, roving and spinning frames. This instrument has also pointed out other things that are of no little interest. It has indicated to us that our card sliver is more even inch for inch after the stripping cycle, and that variation increases as the cylinders and doffers become loaded. We were not aware that the cross lay of fibers in a card web had a bearing on the uniformity recordings and drafting quality of sliver. We had no idea that a lot of our irregularities could be traced to such small things as worn trumpets.

Strictly speaking, all of our testing instruments are not infallible. We, too, have not been infallible in some procedures that we have been known to employ in the use of some of our instruments. It is necessary that we use judgment along with testing, to really profit by it. While the sliver tester is quite valuable to us, it does not reflect variations that come from small patches of damaged card clothing, and machine made neps caused by narrow felting streaks on card cylinders. Yet, better judgment tells us that things of this kind have no place in the production of good yarn.

The tensile strength values that some of us have obtained from our skein and cloth-breaking machines have not always represented the best that we could do. We cannot afford to disregard abnormally low values and say that they are caused by discrepancies on the part of the testing machine operator. We have realized by studies of these low values that many of them originate in our processing machinery. We also

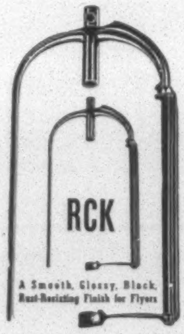
Lybrand Heads South Carolina S.T.A.

James B. Lybrand was elected general chairman of the South Carolina Division of the Southern Textile Association following the group's Spring meeting at Parker High School, Greenville, April 3. Mr. Lybrand, formerly chairman of the group's carding and spinning section, is overseer of carding at the Greenville plant of Mills Mill, a Reeves Bros., Inc., subsidiary. He succeeds J. L. Adams, superintendent of Beaumont Mfg. Co., Spartanburg, as general chairman. R. A. Taylor, assistant superintendent of Norris Cotton Mills Co., Cateechee, was named chairman of the carding and spinning section.

Besides Job J. Mills, whose paper is published on accompanying pages, the 150 operating executives heard Nathaniel M. Mitchell, president of Barnes Textile Associates, Boston, Mass., discuss the textile industry in India. India's textile industry is the world's third largest (behind the United States and Great Britain), said Mr. Mitchell. "Operating conditions in Indian mills are perfectly terrible because they always pick the most difficult way of doing something." The wage scale there is about $5.38 weekly for a feeder tender up to $42 weekly for an overseer—less than half the American scale. Textile plants in India are not unlike those in the United States, he said, except that most of the machinery is English-made and spinning is of the narrow gauge type. Family trusts have operated the mills for generations.

Arrow indicates how Ideal changed spindle to mill specifications
Arrows indicate how Ideal changed spindle to mill specifications
Arrows indicate how Ideal changed spindle to mill specifications
Arrows indicate how Ideal repaired whorl and lengthened blade to mill specifications

LITTLE CHANGES MAKE BIG DIFFERENCES *in Quality*


RCK
A Smooth, Glossy, Black, Rust-Resisting Finish for Flyers

Leading mills are finding they not only save time but improve quality when all spinning spindles and bobbins are uniform in size and style. They are finding, too, that Ideal can *change* their present spindles at a fraction of the cost of replacements. Shown above are a few of the many type spindles Ideal has changed to mill specifications.

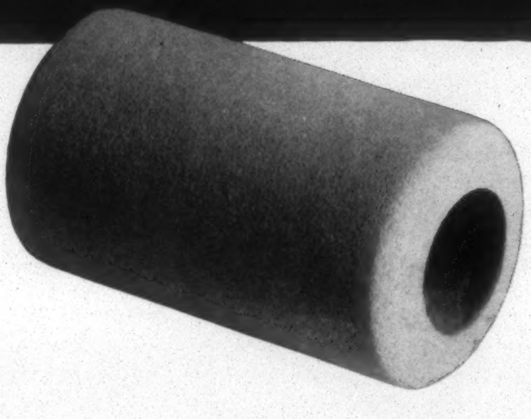
If you are having difficulties, due to too many kinds of spindles, Ideal can save you time and money—so why not investigate the possibilities of *standardizing* on your *favorite* type of spindle. Ideal's precision workmanship assures exact conformity to your specifications.

IDEAL MACHINE SHOPS, INC.

BESSEMER CITY, NORTH CAROLINA

24TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

NO EYEBROWS LESS CLEARER WASTE



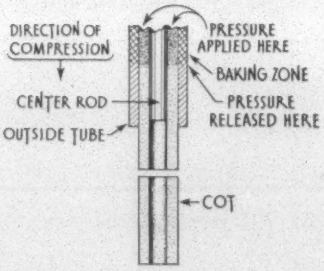
Armstrong's Cork Cots have extra friction

The highly frictional surface of Armstrong's Cork Cots eliminates eyebrows. This extra "grip" carries clearer waste well back onto the clearer boards, so there's no danger of waste's dropping off or being nipped into the work. Thus clearer picking is minimized and the number of slubs is reduced. At the same time, cork reduces clearer waste as much as fifty per cent.

The extra "grip" of Armstrong's Cork Cots also gives you more uniform drafting and helps produce top-quality yarn. Their resilience and uniformity mean fewer ends down per thousand spindle hours, so your operators do less piecing up. These cots recover quickly from most laps and hard ends. They won't flow under roll weighting. And since they are extruded, they have no hard or soft spots to grip the yarn unevenly.

Ask your Armstrong representative for samples, prices, and additional information on Armstrong's clean-running Cork Cots. Or write today to Armstrong Cork Co., Textile Products Dept., 8204 Arch Street, Lancaster, Penna.

EXTRUSION PROCESS PRODUCES SEAMLESS CORK COTS



Armstrong's Cork Cots have no structural weakness to cause premature breakdown. Each cot is uniform in density from inside to outside, from end to end. Each compresses evenly, spins stronger yarn.

[illegible]

ARMSTRONG'S CORK COTS

ACCOTEX COTS • ACCOTEX APRONS

discovered that we could obtain slightly higher tensile values for cloth by a quick tightening of one of the holding jaws after the testing machine had started into motion. We cannot excuse this little trick by saying that our tensile machines are not foolproof. We now consider that the results we obtained through the use of this trick were not true values. We have looked a little further into it, and are led to believe that we had been toying with a strength-stretch relationship that may be of real value to us, if we knew more about it.

We have become aware that such properties as tensile, stretch, abrasion, porosity, rupture, shrinkage and flex are indexes that determine the suitability of cloth for particular usages. We are likewise aware that these properties are not only influenced by fiber properties, but also by things that we do in the mill. Over the years, testing procedure has had a pretty rough row to chop in overcoming our belief that our industry was purely a mechanical one in which there was little new for us to learn. We no longer adhere to the idea that testing in our mills is more of an art than a science. As a result, we are already being rewarded with better techniques.

Mr. Mills' paper was presented before the Spring meeting of the Southern Textile Association's South Carolina Division at Parker High School, Greenville, April 3.

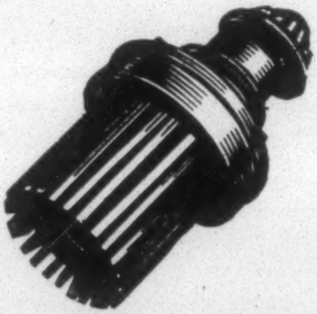
RAYON STAPLE DEVELOPMENTS

By HAROLD ASHTON, Manager, Arrow and Westcroft Mills, Courtaulds, Ltd., England

MUCH has happened in the field of rayon staple development since I first visited your country in 1935 and though we have both seen the misuse of the fruits of fiber technology in some parts of the world, we have together escaped the major dangers of allowing our work to be prostituted on the basis of substitution for political or anti-social ends. In both our countries rayon staple has emerged as a major factor in textile production and offers today a wonderful opportunity for the expression of personality and technical skill in the manufacture of textile materials based on merit development and aimed at consumer satisfaction.

It is our responsibility as textile technologists to see that this is and continues to be our long-term aim despite the temptations and distractions which on the short view may deflect some of us from our path. The man-made fibers of today are the fruit of long-term fundamental research patiently conducted in laboratories, colleges, universities and work shops. Fundamental research is and must be a continuing process, but it must be matched by an equal quality of technology or applied research able to match in speed of development and application for peaceful and constructive ends the achievements of our fundamental scientists, who are extending at a fearful rate the boundaries of human knowledge of the nature of matter and natural forces. It has been said "that knowledge not applied is useless" and though I could not subscribe to this as a universal axiom I am certain it is very true of the field of textile technology. It is for this reason that in the present stage of development of spun rayon I regard technology as the key to the future.

The problems of the technologist in spun rayon have been made more complex by the necessity to develop the use of the new fibers in and through the pattern of existing conventional spinning systems. While this approach rendered possidle a quick getaway into volume production, it also has involved the acceptance of limitations on the ultimate quality of our production which we must regard as temporary and the responsibility of the technologists, working in collaboration with the machinery builder, to remove. In facing the problems, we cannot be content merely to tinker with existing processes of fiber manipulation but must be bold enough to burst the bounds of conventional conceptions of processing equipment and compel advances by making forays into other fields of achievement and refocussing the knowledge thus gained onto our specific problems. As I see it, we have two outstanding problems: (a) the development of a satisfactory sliver-making technique over the full range of desirable fiber dimensions; and (b) the develment of long drafts with control over the full range of desirable fiber dimensions.



As I have said before, I still regard the desirable fiber dimensions as including a free range over staple lengths of from one to four inches, at least, with a filament denier range of from one to eight, in any combination. This minimum range is in my view essential if we are to command the full potential of staple fibers, of whatever kind, in finished performance and involves a close study of fiber character, staple, length and denier in relation to the yarn count range over which these can be processed. Here let me say that, as a visitor to your country, I have been very much impressed by the tempo of your increasing experience in these fields, made possible by the provision and installation of new and modified spinning equipment on a scale, which for many reasons we have not yet been able to achieve. The range and enterprise of your work in pursuing our common goal, in tow-to-top conversion methods, modified drafting systems, direct spinning technique and non-woven fabrics, apart from the application of some of the results obtained to natural fibers in the form of your American worsted spinning system, I find most exciting. It also reveals how profound has already been the effect of rayon staple on the previous conceptions of fiber manipulative processes. We, too, have been at work in all these ways, and though we have not yet been able to achieve such a plethora of experience of new equipment in actual production as have you, we are making steady progress as our understanding of the nature of our problems expands.

Sliver-Making Technique

You would be the first to admit, I think, that despite the variety of your experience in this field we have both a long way to go before we can claim to have mastered this problem. The limitations revealed either to process, staple or denier, of all results so far achieved with modified carding methods or tow-to-top conversions compel us to contemplate the possibility of working out some new or radically different approach to sliver-making. The requirements are simple to state. They involve the provision of a satisfactory fiber dispersal technique combined with a method of fiber condensation and sliver assembly and the key lies in the dispersal technique. As we see it, the solution is only to be found by close collaboration between the fiber manufacturer, whose task it is to produce fibers easily dispersible as individuals, and the textile technologists, together with the engineers, working out an application of aero-dynamics to the dispersal and control of individual fibers in the mass. Work now proceeding in England on these lines shows more than a little promise of providing the answer.

Long-Drafting Technique With Long Fibers

The progress already made in the United States in this field, exemplified by your Inter-Draft and Super-Draft machines for preparatory stages and the Z-2 and apron drafting systems as applied to ring spinning, convince me that we are within reach of a satisfactory method of combining long-draft with control of a variety of staple lengths and deniers as soon as we have command of the full range of fiber dimensions in sliver form to present to them.

"No thanks, I'm just resisting."

Direct Spinning

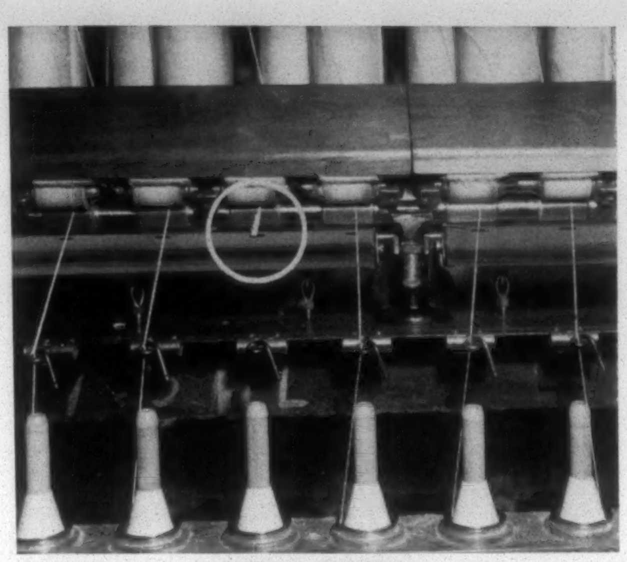
The limitations of an obvious approach to spun rayon production, direct spinning, are many. The destruction of intrinsic fiber properties and the consequent effects of this on the performance of finished materials are serious handicaps which may, however, be overcome, or at least minimized. Should it prove possible for the fiber manufacturer to close or narrow the price gap between suitable tows and baled staple, a very interesting position would at once arise. In the meantime, there are various uses where direct spun yarns may find an opportunity of capitalizing their defects as compared with spun rayon yarns produced from baled staple, such as combination yarns or spun rayon crepe yarns where the shrinkage propensities of direct spun yarns could be used to good advantage.

Leaving for the moment these basic conceptions of the tasks confronting technologists in the machinery and the processing spheres, let us examine briefly what we are now doing with some of the fibers available today. It is quite obvious that in both our countries the pressure for production of standard qualities has slowed down temporarily the provision or rapid expansion of new or modified versions of existing fibers. At the same time, due to widening price disparities between available rayon staples and natural fibers, there has been heavy pressure to use rayon staples in ways that are not entirely desirable or which merit development. The fortunes of protein fibers so far will not mislead technologists who know that there is a very promising field for matched blends of protein and cellulosic fibers apart from their use in other directions. Wide as are the the uses to which viscose and acetate staples in their various permutations are being applied, we have not by any means yet seen the end of possible modifications of their characters or uses. A case in point is the use of Rayolanda, a modification of viscose by after-treatment and spun-dyed colors with both of which we have more experience in Great Britain than you have here.

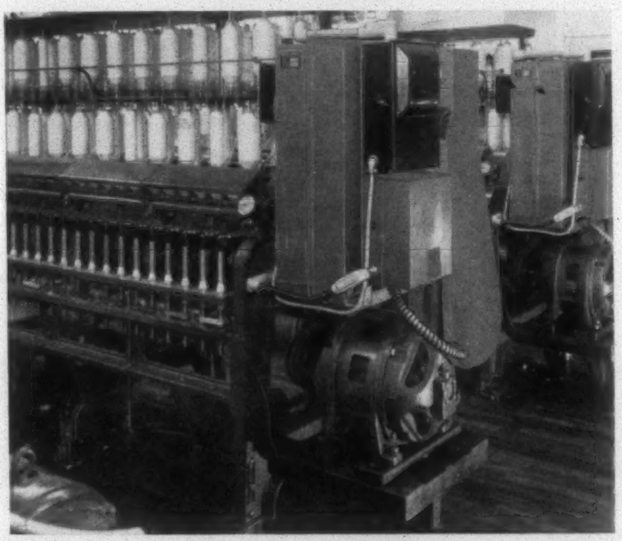
Rayolanda

Rayolanda is the Courtauld brand name applied to viscose rayon staple chemically modified to render it amenable to dyeing with a wide range of wool dyestuffs whilst yet retaining the direct dyeing affinity of viscose fibers. It has a characteristic fullness of handle due mainly to an improved fiber resilience as compared with unmodified viscose. It was first introduced for use in blends with wool on the worsted system in filament deniers of about 4.5. The distinctive dyeing properties of Rayolanda render it particularly suitable for this, as by simple control of dyebath temperature solid or tone in tone effects with wool can be obtained in piece dyeing, in addition to the facility that in cross-dyed goods the Rayolanda content can be tinted off to reduce the chalk-like appearance sometimes apparent with viscose-wool blends. It is now also being made in deniers of 1.5 and three in staple lengths suitable for cotton machinery, and some very interesting blends with both viscose and wool have been produced in this way.

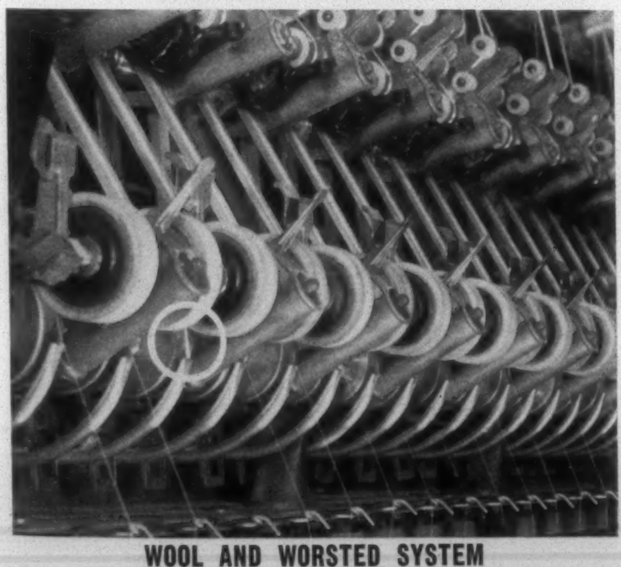
The use of two-inch, 4.5 denier Rayolanda in blends with



COTTON SYSTEM



UNIT TYPE EQUIPMENT



WOOL AND WORSTED SYSTEM

Another Million Spindles Will Be Equipped This Year With

PNEUMAFIL *

The Results From These:

- **INCREASED PRODUCTION**
  - Higher frame speeds
  - More productive spindles
  - Less frame stoppage
  - Less ends down
  - Better running work
- **IMPROVED YARN QUALITY**
  - No spinning doublings
  - Less slubs, gouts and end piecings
  - Improved end piecings
  - No "wild" or flying ends
- **LOWER MANUFACTURING COSTS**
  - Less spinning, cleaning and sweeping labor
  - Improved and controlled waste salvage
  - Less overhead per production unit
  - Reduced spinner training time

These benefits spell profits to you and better jobs for labor

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either wool or viscose and in particular with spun-dyed viscose colors on woolen machinery has revealed a very promising field of development in dress and coating fabrics, while flax spinners are producing yarns in 100 per cent Rayolanda because of its improved handle in cloth. You are certain to hear much more of this and other modifications of cellulosic fibers.

Spun Dyed Colors

From the experience already accumulated with these colored fiber productions on all the spinning systems in Great Britain it is abundantly clear that large-scale developments can be expected to follow the larger capacity which ultimately will be devoted to their production. A few examples of their use in finished cloth are available here for examination. Requirements will differ somewhat in the various trade sections, with woolen spinners calling for heavy, dark-blending shades with worsted and cotton spinners using lighter, brighter shades.

Eleven colors including black are immediately available for cotton spinners and it is expected that brown will be added shortly. All these are in Class 5 for washing fastness and none are lower than Class 5 for light fastness, with half the colors in about Class 7. These performances in light and washing fastness, plus their ease of processing as compared with raw stock dyed fibers, make them very attractive with regard both to price and quality for color work. The field thus opened for blending is of course almost infinite. It is, however, very desirable to limit to a reasonable number the total range of solid shades to be made by the fiber producer. At the moment we are actively engaged in exploring, with specialist assistance, the whole field of fiber blending based on 11 colors. It is already clear that a very much wider range of apparent solid hues can be obtained by fiber blending and other interesting possibilities are being increasingly revealed. A large amount of work is involved, but we hope within the next two years to be able to publish a complete range of examples, together with specifications for general use. I know that some cotton spinners will look askance at the prospect of colored fiber blending work, but I can only remind them that this is only one facet of the range of possibilities spun rayon development will bring in train in its march towards mass production on the basis of variety for merit development.

Rayon Staple Cotton Blends

For many years I have expounded the view that cotton/rayon blending work based on an intelligent use of complementary fibers can extend the worthwhile use of both materials. The present price disparity between cotton and rayon staples offers both opportunities and dangers. It is very improbable that these disparities will persist, though while they remain, they obviously encourage development in this field. On the other hand, the present position carries the insidious risk of reckless substitution of lower priced rayon staples for cotton without due regard for consumer satisfaction or the future welfare of these blends. The integrity and skill of the textile technologist is the surest safeguard that we can absorb the opportunities and avoid the dangers.

Mr. Ashton's paper was presented before the April 7 meeting of the American Association of Textile Technologists in New York City. Acknowledgment is made to the directors of Courtaulds, Ltd., for permission to publish this paper.

H & B Now Operating Pilot Mill

H & B American Machine Co. has announced the opening of new exhibition rooms at its Pawtucket, R. I., plant. The machinery on exhibition is laid out so as to create what is actually a pilot cotton mill within a large textile machine works. All equipment can be set in operation in a few minutes time, thus making it possible to follow the flow of the cotton from bale to twisted yarn, with each successive operation performed on the latest H & B preparatory cotton machinery.

Opening and picking in the new H & B American Machine Co. pilot mill in the firm's plant at Pawtucket, R. I.

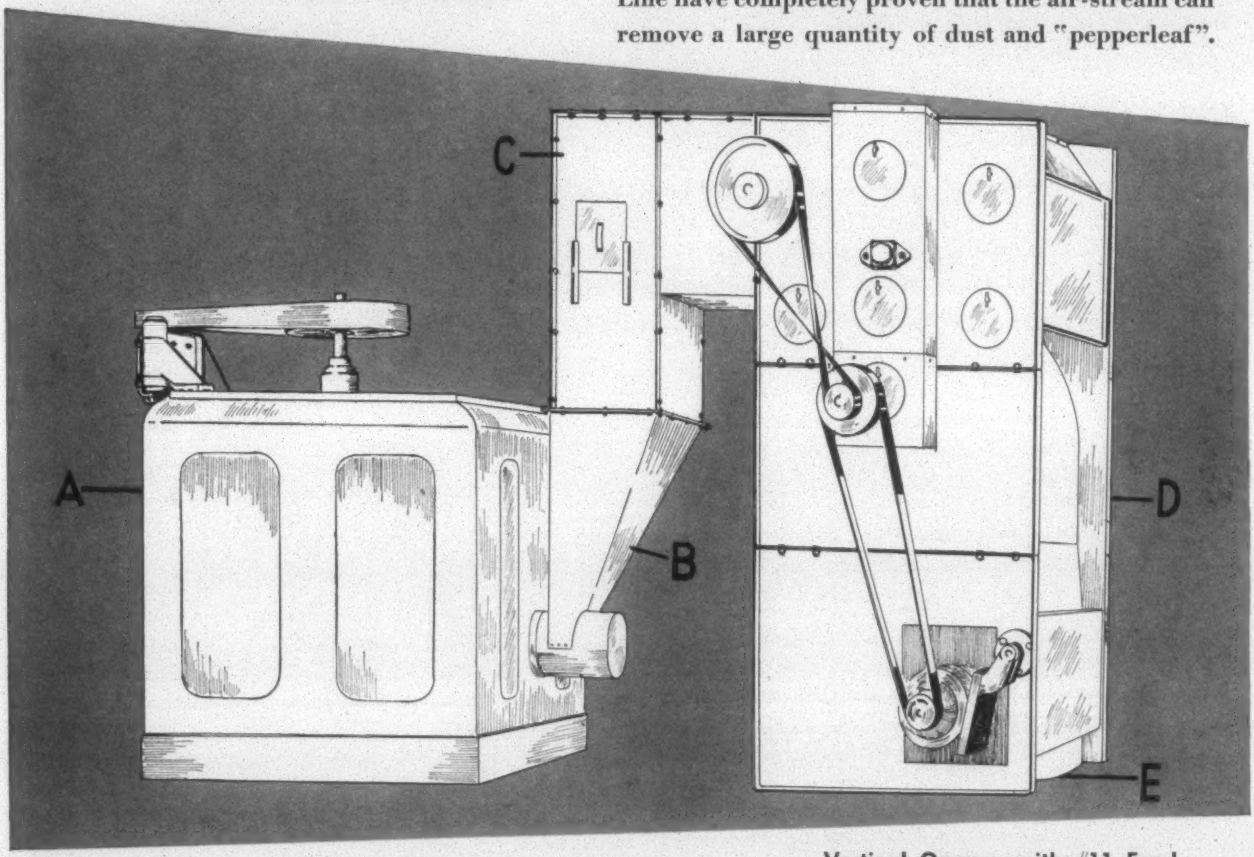
In one room combining opening and picking operations, cotton is fed through blending and waste feeders to a delivery apron and thence to a large blending hopper connected to H & B's tandem opening and cleaning unit. The cotton is then moved by air, through a cleaning trunk to a condenser from which it is fed to a one-process picker by means of a rake distributor. The flow of the cotton from the opening line to the one-process picker is governed by an electrical switch control energized by the movement of the swinging plate in the hopper of the picker.

The entire line of equipment very closely approximates the layout of an opening and picking room in a cotton mill. Cotton is not handled from the time it is fed into the blenders until it is removed as a finished lap from the calendar section of the one-process picker. Laps produced on the picker are then weighed and trucked into an adjoining room for carding.

Drawing, modern high-draft slubbing and long-draft

ANOTHER point of cleaning

Saco-Lowell engineers have demonstrated that air currents can be one of the most efficient means of removing troublesome light particles of pepperleaf, seed fragments, and dust from the cotton. The results obtained by mills which have installed one or more #11 Dust and Waste Extractors in the Opening Line have completely proven that the air-stream can remove a large quantity of dust and "pepperleaf".



Vertical Opener with #11 Feed

- A — Vertical Opener
- B — Connecting Trunk
- C — Reserve Box
- D — #11 Dust & Waste Extractor
- E — Discharge to #6 Air Filter.

It has been standard practice to utilize the blooming and cleaning action of the #11 Dust and Waste Extractor by using this machine as the feeding unit for the #12 Lattice Opener. The success of the unit at this point prompted us to install the #11 before the Vertical Opener.

The stock is carried from the feed table to the screen section of the #11 Extractor by the air current generated by the fan of the unit. The clean stock is condensed on the screen while the light particles of dirt and the dust are pulled by the air current, thus separating trash from the good fiber.

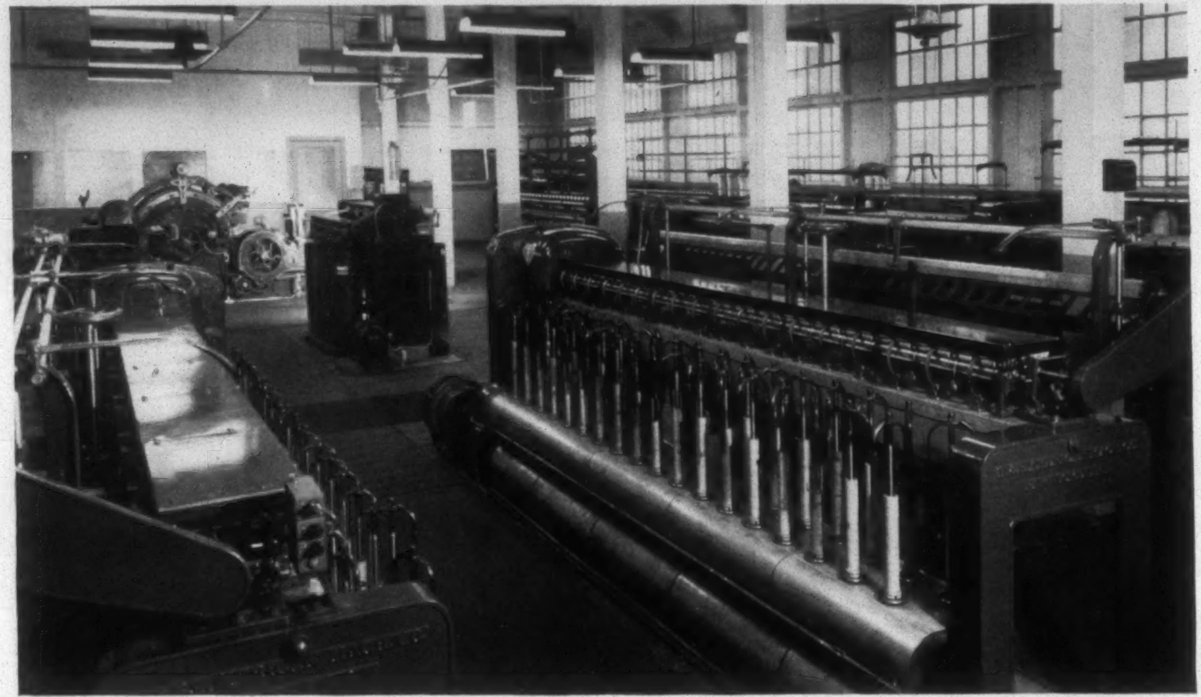
The Reserve Box of the #11 Dust and Waste Extractor provides a means of feeding the stock to the Vertical Opener more evenly, thus eliminating chokes, and making possible the formation of a more uniform feed to the remainder of the Opening Line.

We would be pleased to have an opportunity to discuss this installation with you and to recommend means of improving the performance of your Opening Line.

Saco-Lowell Shops
BOSTON • Shops at BIDDEFORD, MAINE
BRANCHES: CHARLOTTE, GREENVILLE, ATLANTA

spinning operations follow in succession. Also on display are twisting frames and a Model "B" H & B rubber covering machine. A controlled humidification system has been installed to assure the proper humidity for yarn manufacture.

In addition to their use for display purposes, the rooms are the initial proving grounds for experimental and development work, conducted by plant engineers. Customers and interested textile men have been invited to visit this exhibition at their convenience.



Roving frames are in the foreground of this view of the new H & B exhibition room. Carding and drawing machinery is in the background at left, spinning and twisting at right.

Make First Assembly Line Cotton Picker

The International Harvester Co. Feb. 17 announced completion of the first mechanical cotton picker ever made by assembly line methods. In the past all pickers have been made by individual machine shop methods, a total of about 200 pickers having been produced in this manner during the past five years. "In the future," a company spokesman remarked, "we expect to turn out that many in two or three months." The impact on the nation's economy, especially in the South, is potentially vast, it was pointed out. However, it was noted by some that there would be few immediate gains for the farmer or the consumer since the increased production of mechanical pickers would fall short of demands created by farm labor shortages which developed in the cotton belt during and after the war.

Two Rayon Plants Planned By New Firms

Two new producers in the rayon yarn manufacturing field, the first since 1931, have announced plans for large new plants to be constructed at an early date. American Development Co., a subsidiary of Beaunit Mills, Inc., New York, recently made known plans for a 20 million dollar rayon plant at Childersburg, Ala., which would employ about 2,500 persons and have a capacity of about 15 to 20 million pounds of rayon yarn per year.

United Rayon Corp., New York, organized Feb. 26, has disclosed plans to construct a new plant with an annual production capacity of four million pounds of viscose filament rayon and 28 million pounds of viscose staple fiber; a site for the proposed plant is yet to be selected. Oscar Kohorn & Co., Ltd., is the only stockholder at present in United Rayon Corp., holding 50 shares for which it paid $50,000 and which constitutes the total issued and outstanding stock. Each share of stock will entitle a purchaser to a production warrant for purchase of a proportionate part of the corporation's output, once the new plant is in full production, the corporation stated. According to United Rayon Corp., the production warrants will entitle each holder to buy annually 600 pounds of viscose filament yarn, having an average denier of 150, or 2,300 pounds of viscose staple fiber, or a combination of the two.

I. Rogosin, president of Beaunit Mills, said the new plant at Childersburg would use the pot-spinning process to produce its viscose filament and that the entire output of the plant would be consumed by Beaunit Mills.

In spite of higher building costs, textile firms are now contracting for better new buildings than they ever owned, according to Samuel B. Lincoln, vice-president of Lockwood Greene Engineers, Inc. Mills today are cutting production corners by erecting highly modern plants, he said. Air conditioning for employee comfort and to aid processing, is being installed generally. Improved appearances for better work conditions have led to more general use of tile in place of the older type painted walls, he continued. Commenting on the trend to compensate for higher building costs and higher wages by securing more production from each square foot of mill area, Mr. Lincoln noted that one specific way to get more production per square foot of floor space is by the design of better machinery.

"Pardon me, but Your Sliver's Showing!"

Reduce costly 'Ends Down' and get a more Uniform, Grease-free Sliver with

Medley drawing!

Yessir, all along the line a poor sliver shows itself . . . in ends-down and resultant lagging production . . . in inferior finished yarn. Grease spotted slivers, too, contribute their share of production headaches.

Medley tackled these problems at a spot where most of the trouble was known to be—the drawing sliver. Result? The Medley Drawing Frame—featuring the now famous "Eight Ends Up," or the conventional 6 ends up drawing with the sealed-in ball-bearing top rolls. The Medley top drawing rolls are ground to near zero tolerance giving the much sought uniformity in the drawing sliver—the sealed-in permanent lubrication assures a grease-free sliver.

Check with Medley—learn how your present drawing can be changed over to the more efficient Medley—watch "ends down" go down—production go up.

Medley has it—or Medley will make it.

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Medley Manufacturing Co., Columbus, Ga. • Gastonia Roller, Flyer & Spindle Co., Gastonia, N. C. • Allan Textile Machine Co., Pawtucket, R. I.

Warp Preparation & Weaving

EVOLUTION OF AN IDEA

Part Four of a Series by H. E. WENRICH

SOME of today's most promising young men are on their way up, getting there with ideas. To keep pace with these young men and to keep up with new, modern machinery, we older fellows must also be on the way with ideas. When something old fails to accomplish satisfactory results, then it becomes an immediate need to think up something new to turn the trick. Surely the employee with many years of experience should be able to match wits with any ambitious younger man.

The writer well remembers one of a well-known loom builder's leading road men remarking, "It's best to start new hands on the automatic looms, including the breaking in of new fixers." Any experienced fabric manufacturer would soon spot the fallacy of that advice. Modern looms running at high speeds with two or more shuttles must be handled by the best mechanics in the plant. The most experienced weavers will turn out the best quality with the highest production. There is a reason—it requires years of background in any industry to obtain full efficiency on productive machinery, and the textile industry is no exception. On new machinery, use the most experienced employees if the need for a better product and more of it is the most important factor.

Of course, weaving machinery is constantly on the march. The old hand-change multiple shuttle looms have no place in our industrial economy, and often, within a few years after its inception, that modern piece of machinery becomes outmoded. Take as an example the modern S-6 loom. Even with its post-war improvements, it has outmoded the S-5 and the other multiple automatics back to the Super Silk loom. And still, with all its many improvements, there are improvements which can be made on the S-6 loom. And if you are familiar with this modern loom—if you are a weaver, inspector, loomfixer or foreman—you stand as good a chance as any other person familiar with it to make some improvement that will promote the loom to greater possibilities.

As an instance, when the picking shaft wears and shows end play, there is no adjustment that can be made on the front shaft bearing to take up the play. It becomes necessary to loosen the back bearing and block out the boss to remove the play. Another idea that you may have is the prevention of loose waste clogging the pick-up remover hose. This trouble is encountered mostly on the hairy, dull and heavy yarns, but the trouble is there to be overcome. Just what is your idea? Can you work it into a neat device that will require practically no attention? If you can, get started and accomplish something definite that will put cash in your pocket. Every plant in the country having such looms will welcome your gadget and you are on the road to a few thousand extra for thinking up a workable solution.

The same reasoning holds for the various motions required to keep the loom in production. Not wishing to harp on the drop-wire motion, it is being brought back into this discussion for the simple reason that throughout the several articles, the plan is to show the evolution of an idea, and how one idea can breed a litter of other ideas. So let us take the stop-motion once more as a subject on thinking up some device that will help in producing more and better cloth. From the first crude warp stop-motion idea, a gadget became an important loom device that became a need for the essential achievement in weaving diversified fabrics. But to reach its present position as a required loom motion, many experiments and tests and additional ideas polished the rough into a fine jewel.

The principle idea of the motion is simplicity at its utmost, yet it required many years of high-pressure salesmanship to put the idea across. At the start, and for many additional years, textile men were frankly skeptical of the device. Their lack of vision in the possibilities of the motion were discarded only after rayon's phenomenal growth demanded the highest degree of workmanship and perfection.

Improvements came only by an incentive of gain, as in the earlier stages of development, only a few sales here and there gave any encouragement to the original inventor. A great number of annoying mechanical and warp yarn defects offered problems and so progress was practically nil. But as further improvements in the accuracy of the warp stop-motion continued to crop up, the device appeared to be finding more favor. Ideas started to crop up more and more, and inventors really got down to business in putting out competitive contrivances. The idea spread rapidly after synthetics touched the textile industry with its magic wand, and not only looms but other production machines became an issue for some form of stop-motion to be used in the making of a better yarn or product.

Now no highly specialized machinery can be run successfully without the help of some type of safety device. Incentive of gain is also the logical reason why many clever craftsmen tinker around with an idea, and finally come up with some gadget that offers improvement over existing devices, or of which may be a radically new idea in conception. Usually, however, a craftsman's best bet is to give out something low in cost, but high in potential gain. Will he benefit sufficiently by his employer's liberality to keep on endeavoring to be more beneficial to his job, or will a pat on the back be the stipend that will supress future ideas and activities?

Let us see what next can be devised that will follow the

597,000 Yards
Before Replacement

97,000 Yards MORE Production

CHATHAM
slasher cloth

The first accurately checked test run on Chatham 100% Virgin Wool Slasher Cloth showed a production of 597,000 yards before the blanket had to be replaced. This was 97,000 yards more than had ever been gotten by this mill on any other slasher cloth. Later runs in many mills prove that this is not an unusual record for this fine slasher cloth.

Every ounce of Chatham Slasher Cloth is of the highest quality and is built to the same high standards which have made Chatham Blankets, Chatham Upholstery Cloth, and Chatham Homespuns famous throughout the world.

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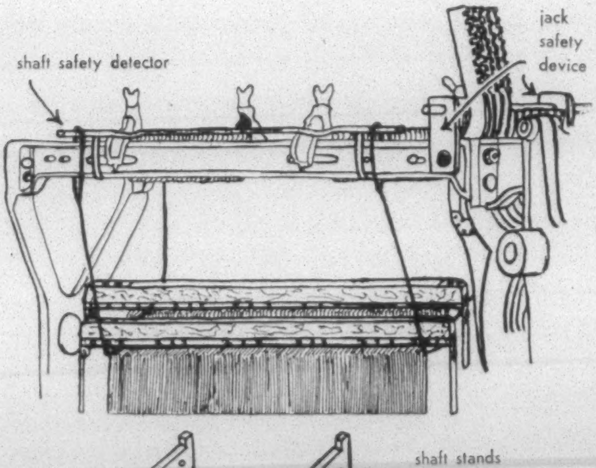
Chatham Manufacturing Co.
Elkin, North Carolina

path of least resistance in thinking up an idea and following it through to a successful gadget. Well, as everyone connected with a weave shed knows, harness shafts break and in falling, often cause a bad smash-out or imperfection. Therefore, there are several approaches that are possible to prevent serious damage to the cloth when a shaft breaks. Some few fixers have tread on this problem and came up with an excellent method of stopping the loom when a shaft is down. But many of these thinkers, after gadgeteering the shaft safety detector, failed to go further in progressing the useful gain of additional use of the electric warp stop-motion. For a short breathing spell, examine the safety detectors shown in the illustration and applied to different locations, but all making use of the motion as a means to an end.

One of the simplest forms of a shaft safety detector is the placement of a wire across the loom arch. This can be a regular mount wire or other wire of about the same diameter. The wire is held up from contacting the metal arch by securing a strip of leather around the arch to serve as insulation. At the one end, regular single-power wire is tinned and leads to the circuit wire between the drop-wire electrode head and the solenoid. Tied over each end of the mount wire and arch, a sling passes beneath the harness shafts upper heddle ribbons, loose enough to allow free movement of the shedding harness. When the shafts are down in normal clearance, there can be approximately one-half inch allowable distance between the ribbon and sling. When a shaft breaks, cable cord loosens, or mount wire, jack eye or cable breaks, the shaft falls down and pulls the sling downward. The weight of the falling shaft is sufficient to pull the end of the mount wire down upon the metal loom arch, thus causing a circuit.

There are other approaches to this same problem. On modern X-D looms, shaft supports are braced on the loom spreaders. When the harness set is placed in between the crank shaft and lay during mounting, the harness thus is supported preparatory to tying in. These two supports, one on each side, can be used as a basis for affixing a detector for fallen shafts. By using a strip of thin spring wire running through an insulated segment so a sliding action prevails, a fallen shaft will cause the spring wire to contact the metal support, forming the circuit and stopping the loom.



Various uses of safety devices, as described by the author.

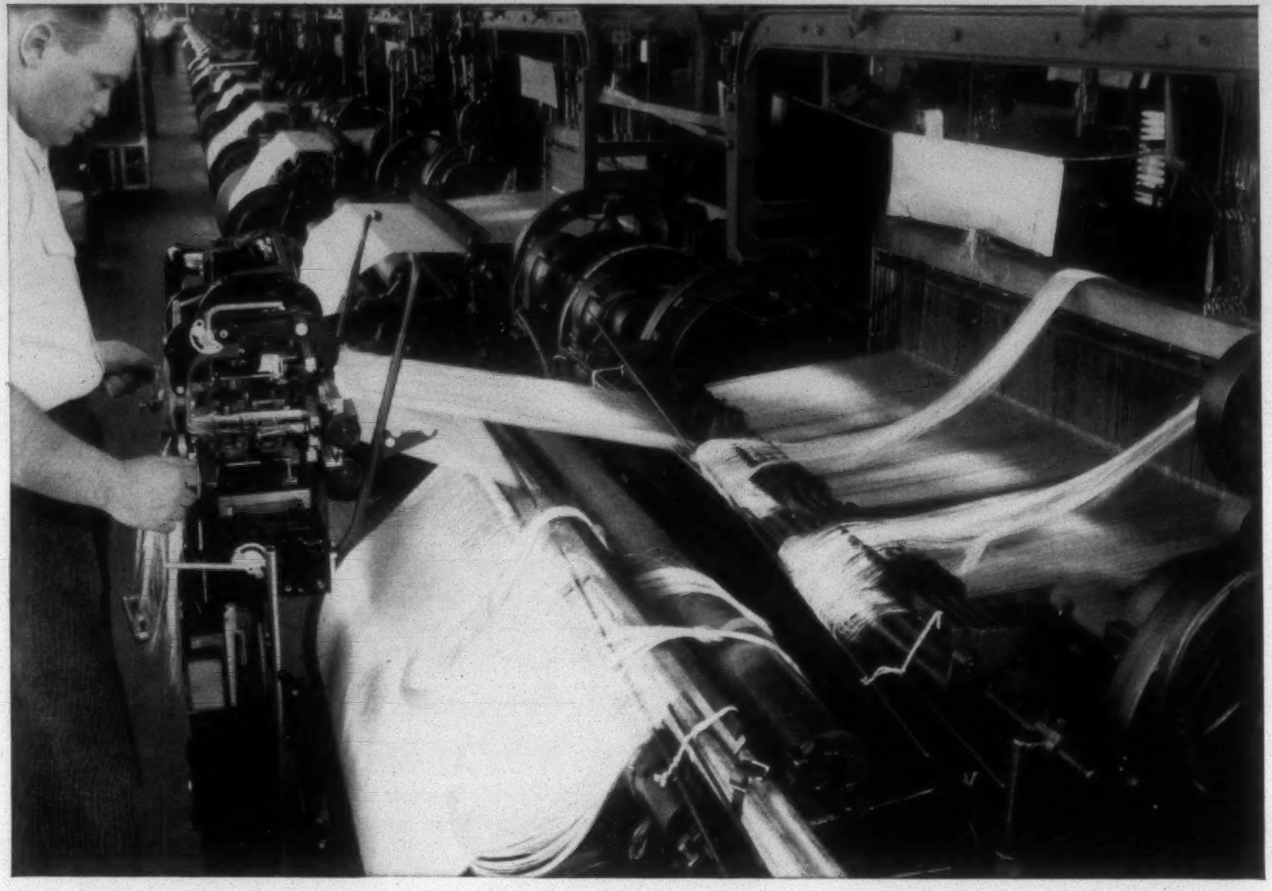
As an instance of how weaving plants can take advantage of new improvements—once gadgets—the shaft support can be used as an example. All looms without this attachment can be so equipped with a somewhat similar device merely by substituting angle iron into a suitable design and belting the improvised brackets to existing loom spreaders, or if necessary, directly to the floor.

Just by examining the fallen shaft detector, the writer once came up with the idea of a broken dobby jack detector. Some looms were running on heavy monofilaments with two jacks to one shaft to help against breakages. An uncommon number of jack buttons, due to the heavy strain, were allowing the jacks to slip free from the back combinations. Looms were non-automatic, but equipped with filling detectors to stop the loom when a bobbin ran empty. Using the principles of loom stoppages from other forms of safety detectors, a gadget was rigged up one-half inch away from the resting position of the jacks so as to stop the loom if a jack broke or slipped off the back. A discarded picker rod, tinned at one end with an electric wire was positioned as shown, short lengths of picker sticks used as stands and insulation. Of course, if placed on automatics, the wire connection would necessarily have to be made to the warp drop circuit instead of to the filling detector circuit.

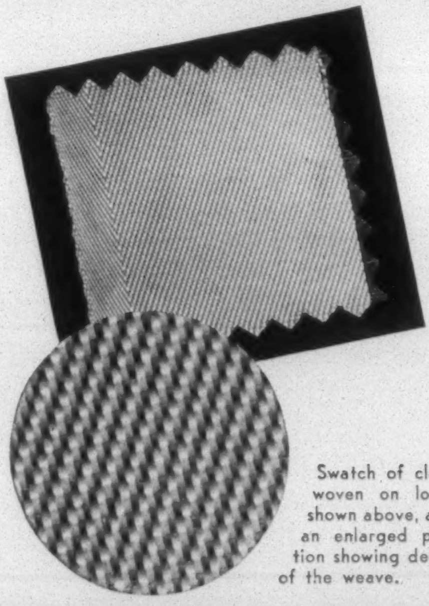
Regardless of what type loom or diversity of yarns, many additional benefits can be secured from the electric motions. On multiple-shuttle looms equipped with box lifter chain and rod motion, protection to various parts can be had by capping a detector over the box guide just high enough to clear when the box is up on the bottom cell. If a box lifter rod breaks, and the cell rises, the detector closes the circuit and stops the loom. In this instance, the circuit wire must lead down the laysword to the rocker shaft and along the loom frame to connect to the solenoid wire. The reason for a long connection of this type, is to avoid frictional abrasion of constant flexing as the lay beats back and forth.

It is obvious that allied machinery in making use of additional devices in conjunction with various electric motions, can increase output, prevent machinery damage and lower costs. Of course, the true value of additional devices attached to any machine will depend entirely upon the particular nature of the gadget and the purpose to which it relates. No machine should be loaded down with cumbersome devices that are of little benefit, but if a need exists for some simple device to eliminate frequent trouble, then by all means get busy.

To those who are under the impression that they have THAT million-dollar idea, think over the legal aspects before spending your all on it. If the idea was tinkered into a gadget on an employer's time, the employer is generally entitled to reap the rewards. There are even cases where the employer secured all title to an employee's gadget, even though the worker gadgeteered the idea into a full working conception at his own home. This is a matter for legal experts to handle and advise. But there are also instances of employees' gadgeteering an idea during working hours and obtaining a patent and complete control over their brain child. The writer has no intention to advise nor confuse—but suggests that workers bring their ideas into useful devices to make their own jobs more efficient and easier. In-



BARBER-COLMAN PORTABLE WARP TYING MACHINE RENEWS WARP IN LESS TIME THAN OTHER METHODS



Swatch of cloth woven on loom shown above, and an enlarged portion showing detail of the weave.

Here is a practical example of the savings to be gained from the use of a Barber-Colman Portable Warp Tying Machine in comparison with hand twisting-in and hand drawing-in. The mill records data below shows that the machine ties in this synthetic warp in $\frac{1}{3}$ the time of hand twisting-in and less than $\frac{1}{8}$ the time of hand drawing-in. The machine works directly in back of the loom, eliminating any necessity for removing, transporting, and resetting weaving elements. Warps for similar patterns but different color distribution can be tied as well as identical patterns. Machines are made for plain or leased warps, and there is a combination machine that can be changed in a few minutes to tie from either a flat sheet or an end and end lease. See your Barber-Colman representative for specific recommendations to fit your needs.

WARP REPLENISHMENT DATA—FROM THE MILL

Warp: 3770 ends of 150 denier 38 filament Bright Viscose Yarn

Preparation Time	10 min.	Helper	1
Tying-in Time	30 min.	Previous Hand Twisting-in Time	$2\frac{1}{2}$ hours
Passing Knots through weaving elements	10 min.		
Total Loom Down Time	50 min.	Previous Hand Drawing-in Time and Loom Gaiting	7 hours
Machine Operator	1		

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND centive of gain, promotion, satisfaction of creative ability, or whatever the reason, individual initiative should not be smothered by a hopeless gesture. Even an idea that shows only limited use if worked into a gadget or plan, should be encouraged. Only by using imagination, thinking the idea out to practical reality and making use of it, will American enterprise prosper with better and more jobs and continue high wages by producing better products and more of them.

Steel Heddle Celebrating Golden Anniversary

STEEL HEDDLE MFG. CO., 2100 West Allegheny Avenue, Philadelphia, Pa., is celebrating its 50th year in business. The largest exclusive textile harness equipment manufacturer in the United States, the firm had its beginning in a modest little machine shop in Germantown, Philadelphia, in 1898, and now operate plants in Greenville, S. C., Atlanta, Ga., and Montreal, Can., in addition to the main plant and general offices in Philadelphia.

Steel Heddle Mfg. Co. pioneered in the production of the flat steel heddle in the United States. In the 1900-1910 period few raw silk fabrics were woven and with the keen competition of the well-entrenched French and English cotton harness, the flat steel heddle encountered a real uphill fight for existence. The introduction of piece dyed fabrics, however, brought a demand for more durable and efficient harness equipment.

The firm continued to improve its product, year after year, not only in regard to the design of the heddle itself, but in the steel from which it was made and its subsequent treatment. A special high-carbon steel replaced the softer Bessemer product to better withstand the abrasive action of the hard fiber of the new silk thread, thereby reducing the cutting or wearing of the heddle eye. As a result, practically 100 per cent of the silk mills of the country were equipped with Ste-Hed-Co flat steel heddles—the most durable heddle ever made since the innovation of the manufacturing of textile fabrics many centuries ago, according to the company.

Early in 1906, due to the success of the heddle designed and manufactured for the silk industry, a heddle was developed for the manufacture of cotton fabrics. Shortly thereafter, states the company, a milestone was set with the introduction of the Duplex and Doup Heddle, which was instantly recognized and adopted, with the result that today a large majority of cotton plants are taking advantage of the long wearing qualities of this particular product, eliminating the annual replacement expense problem.

The plants of Steel Heddle Mfg. Co. J. J. Kaufmann, president and general manager, is shown at left; at right is Robert J. Freitag, vice-president and treasurer.

With the manifold construction of mixed fabrics, heddles of every description, ranging from the finest for silk fabrics to the heaviest for extreme constructions, have been developed by Steel Heddle Mfg. Co. with the result that probably over 2,000 different kinds of heddles are made to meet this demand.

Ste-Hed-Co met the challenge of rayon in the 1920s with the Artex heddle which the firm states is recognized as an indispensable medium for weaving the finest of warp threads, with an indisputable production record.

Along with efficient and durable heddles, suitable frames had to be constructed. With the first silk heddles, came the creation of the slide hook frame. This frame possessed outstanding features and served the purpose most efficiently up to this time. The frames followed closely the changes in the types of heddles and many new types of frames resulted through the efforts of Steel Heddle Mfg. Co.

Recognizing the necessity of furnishing complete harness equipment, a new department was created with the manufacturing of all-metal reeds, afterwards followed by the manufacturing of the pitch-band type. Today, with up-to-date mechanical equipment throughout the plants, practically all types and sizes of reeds are produced as used for the manufacturing of highly-specialized fancy fabrics. The department grew into one of the most efficient and modern reed shops in the country, and with the knowledge gained from the rolling of heddle wire, the skill obtained reflects itself in the quality of the reed wire. As a result, the company soon found it necessary to establish additional plants in Greenville, S. C., in Atlanta, Ga., and in Montreal, Can., all under the supervision and management of graduates of the Philadelphia plant.

In 1933, due to the urgent demand for the company to supply mills with a line of shuttles, the company inaugurated the Southern Shuttles Division, and built a large plant in Greenville, S. C. A much larger and new plant is now being built in Greenville for the production of shuttles. Steel Heddle Mfg. Co. also makes a complete line of harness accessories, including many specialties, such as gauges and lancette heddles, used in the manufacture of velvets, plush, and freize goods, etc.

Now, in its 50th year, the company maintains a large staff of experimental engineers who are always working on new equipment and items, to keep the loom harness equipment always ahead of the demand and capacity of the latest looms. Offices, with a corps of practical field engineers, are maintained in Philadelphia, Pa., Greenville, S. C., Greensboro, N. C., Atlanta, Ga., Providence, R. I., Montreal, Can., and many other textile centers.

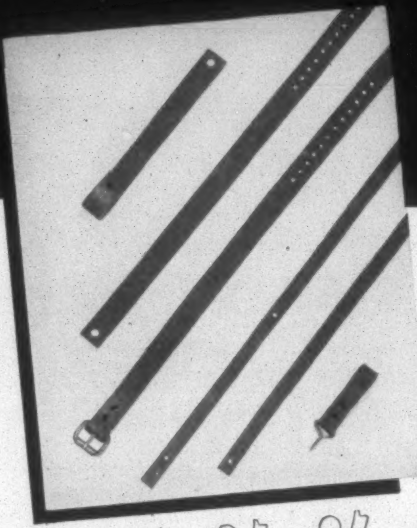
EMMONS LOOM STRAPPING

★ SPECIALLY CONSTRUCTED!

★ OIL RESISTANT!

★ STRETCH-PROOF BUCKLE HOLES!

★ OUTLASTS LEATHER MANY TIMES!



Another famous Emmons E-Man Presentation:

Emmons Loom Strapping is manufactured by Emmons to your sample or specifications. B. F. Goodrich Co. supplies the material, especially constructed for the purpose. This material is made up of layers of strong, heavy duck, impregnated with a soft pliable neoprene friction and is very resistant to stretching.

Emmons Loom Strapping is available in any length or width and in two thicknesses, 3-ply—3/16" and 4-ply—1/4". Eyelets, rivets, buckles, etc., can be supplied.

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MAIL HARNESS

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SLASHER AND STRIKING COMBS

EMMONS LOOM STRAPPING
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RUN-RITE PLASTIC SHEAVES
Manufactured by National Plastics, Inc.

McLANATHAN LEATHER PRODUCTS
Condenser Tapes • Wondertan Stripper • Belts • Aprons

EMMONS WEAVE ROOM EQUIPMENT

Annual Report
to the
Weaving Industries
on
C&K Loom Developments

No revolutionary changes are about to burst from the C&K Engineering Research Laboratories. For no lucky accidents have occurred here in the past year to short-cut any of the planned projects which move forward steadily on the basis of careful, organized work. Progress may be reported in these directions:

REDUCTION OF VIBRATION IN LOOM FRAMES: New methods of mounting looms are being studied, in an effort to reduce transmission of vibration to the mill building without increasing the motion of the loom. Dynamic balancing is also being studied. And progress is being made by use of light metals.

LAY: Magnesium and aluminum handrails are being mill-tested. And a magnesium lay indicates a possibility of higher speeds for narrow-fabric looms.

DRIVES: *Direct Drives,* as used on large, slow-speed looms, have been improved in two ways: (1) by a solenoid brake mounted directly on the motor shaft, or (2) dynamic braking which stops the motor-rotor by introducing rectified power in the windings.

Independent Drives, as used on high-speed looms, require a clutch to handle the flywheel effect of the motor. C&K has developed for the S-6 Loom a plate clutch, of great capacity and small clearances, which can be easily released in a remarkably short interval. Also, this clutch may be re-lined without disassembly. At the same time, experiments are in process on an electrically operated clutch.

MAGAZINE: All C&K types of rayon looms are now being built with vacuum control of the filling yarn.

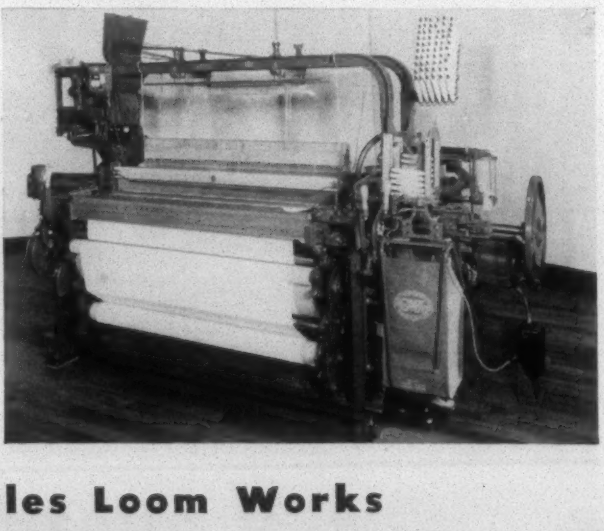
FEELER MOTION: The feeler which detects absence of yarn on bobbins, and which actuates the magazine, has been developed in two forms: (1) an electric feeler for delicate yarns, and (2) a mechanical side-slip feeler for cotton and worsted. Both these feelers have a light touch, yet are positive-acting. Studies indicate possibilities of further improvement.

PROTECTION: In stopping the loom to prevent the shuttle from damaging the warp, the problem is to absorb a large amount of energy with minimum shock to the machine. On large, slow-speed looms, dynamic braking of the motor is successfully used. On high-speed looms, other methods are required and these are now under experiment.

LET-OFF: Increasing diameter of loom-beams brings problems in the efficient operation of let-offs, which must maintain uniform tension on the warp, and feed the warp from the beam. C&K is moving toward the use of a let-off driven by a motor controlled electrically by a contactor which is actuated by the warp. This electric control responds to very slight changes in warp tension.

BEAMS: Experiments are in progress on beams of steel, cast iron and light metals, singly and in combination; also on locking devices for adjustable flanges.

In every case, the final decision will be made by weighing the cost of the part or motion against its merits. And in any *case, you may be sure that any new C&K loom-feature will measurably increase weave-room efficiency.*

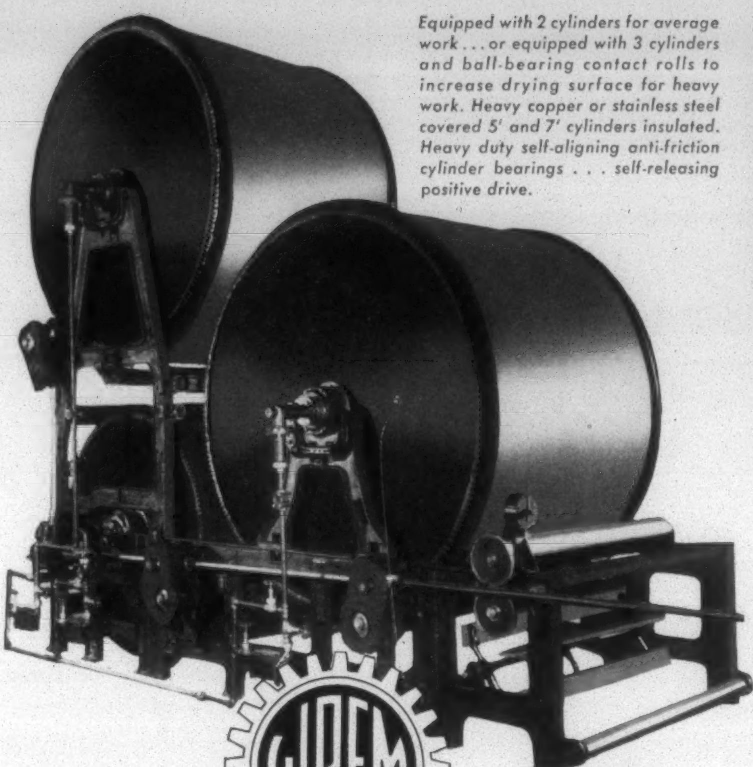


Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.

C&K A Loom for Every Woven Fabric



Equipped with 2 cylinders for average work . . . or equipped with 3 cylinders and ball-bearing contact rolls to increase drying surface for heavy work. Heavy copper or stainless steel covered 5′ and 7′ cylinders insulated. Heavy duty self-aligning anti-friction cylinder bearings . . . self-releasing positive drive.

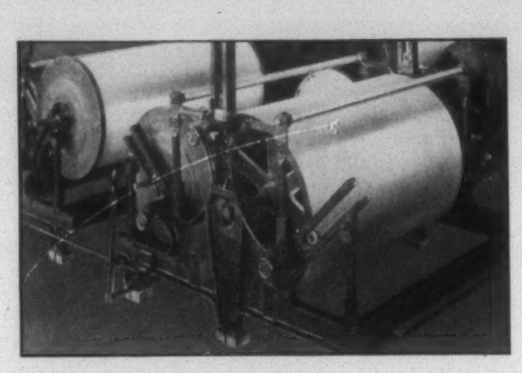
The new COTTON SLASHER

Sure cure for size troubles!

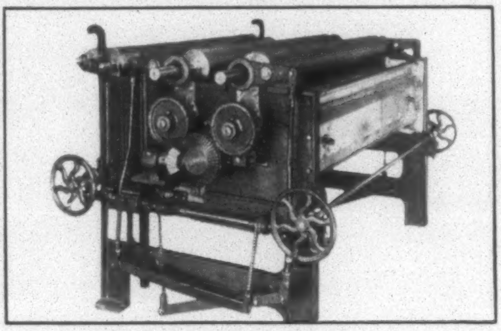
Here's a new, improved, mill-tested Slasher . . . combining many special features and equipment . . . that's designed to correctly size the lightest gauze or the heaviest sheeting at top speed and lowest cost.

Whatever your specific mill requirements and problems, the WPF&M Slasher can be adapted to fit your needs and cure your sizing troubles.

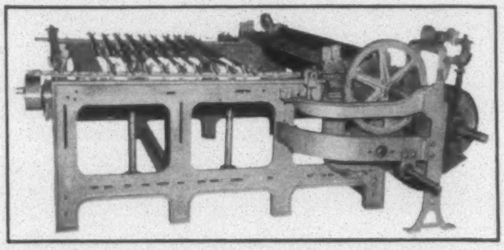
Check the many outstanding features found only in the WPF&M Slasher. Let us show you how modern slashing equipment and methods can increase production, improve quality and reduce cost.



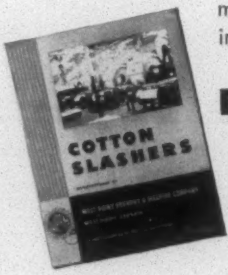
WHITE CREEL (above) — positively driven — controls yarn stretch; makes sizing faster, more uniform; smooths starts and stops; eliminates breakage and waste. Also available: standard over-under type creel with continuous side rails or extra-height, close-coupled creel for limited space. All creels ball-bearing equipped.



Stainless steel SIZE BOX with extra deep bronze stuffing boxes. Size rolls mounted on ball-bearing journals. Special squeeze-roll lift eliminates strain . . . keeps squeeze rolls accurately positioned over size rolls.



HEAD END, built for single or double beams up to 26″, is ball-bearing throughout, either friction or motor driven with variable speed transmission, variable speed single drive, or multi-motor drive. Independent beam wind-up for beams over 26″ in diameter.



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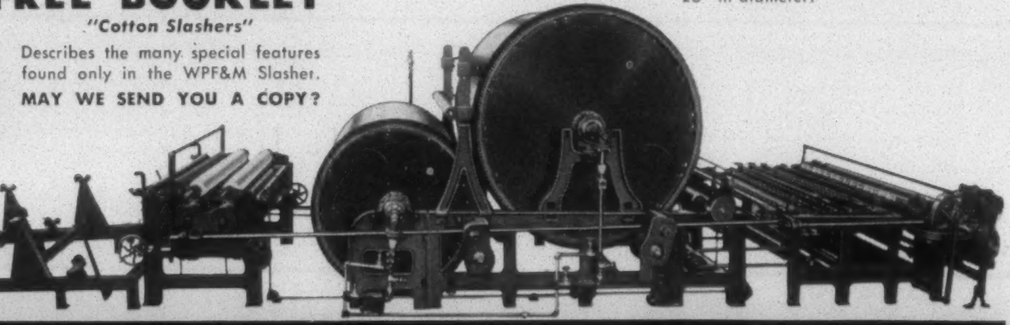

Manufactured by

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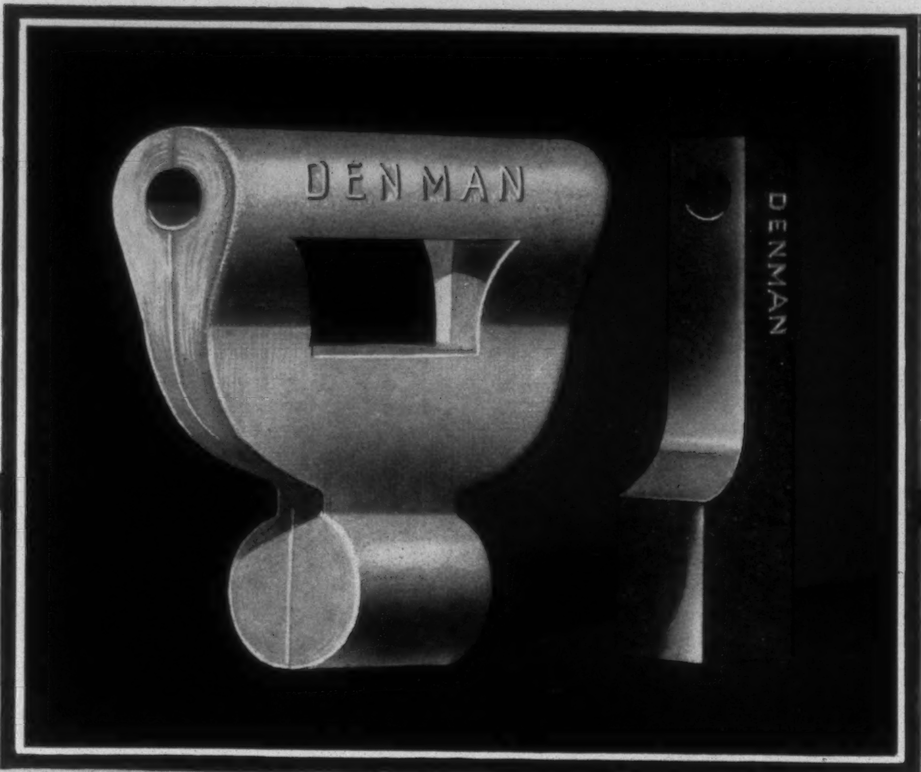
WEST POINT, GEORGIA



DENMAN *Challenges the* FIELD

Back when many of today's high-speed looms were still in the blueprint stage . . . Denman and Terrell were pioneering tougher rubberized fabric pickers.

Today, comparative cost records put Denman first in service and economy. Today, also, users of Denman Pioneer Pickers can be sure they are getting a proved and tested product that has been developed and perfected through the continuous efforts of the Denman-Terrell inter-related research . . . research that carries over many years of broad experience and knowledge gained through the cooperation of mills in making actual operating tests, as well as in the laboratory. That's why Denman Pioneer Pickers triumphantly challenge the field—to give you

LOWEST COST PER LOOM . . . PER YEAR

Exclusive Sales Agents

THE TERRELL COMPANY, Inc.

CHARLOTTE, N. C.

it all depends on your point of view

When our customers think of STEIN-HALL some see laboratory smocks microscopes and rubber gloves...and some see pin-stripe suits, brief cases and order pads.

The astigmatism needn't be corrected though, for STEIN-HALL actually is all of them ...and at the same time.

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pH In Textile Finishing Processes

By FRANCIS TRIPP, B.S., M.S., Ch.E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

THE symbol "pH" is being mentioned with increasing frequency in the literature concerned with textile finishing operations. The technical bulletins which describe the application of the numerous finishing materials now being applied to textile fabrics frequently emphasize the importance of controlling the pH of the bath during the application of the material. The textile literature contains numerous articles reporting studies concerned with pH in relation to dyeing and finishing processes.

Practical men and workers in dyehouses, printing concerns, bleacheries and textile chemical manufacturing concerns have undoubtedly heard pH mentioned many times during the past decade. Unfortunately, most of the information explaining the meaning of pH must be obtained from standard textbooks which are written for advanced students of chemistry. Most of the explanations are too complicated for the practical man to comprehend. The purpose of this article is to explain in a simple way the meaning of pH and mention its importance in textile dyeing and finishing processes.

A brief discussion concerning acids and bases will serve as an introduction. Early in the study of chemistry the student is taught that all matter is composed of atoms which are all alike for any given element. Atoms can unite with other atoms of the same element or with atoms of other elements to form molecules. For example, one atom of hydrogen can unite with a second atom of hydrogen to produce what is known as a molecule of hydrogen, containing two hydrogen atoms. Likewise, one atom of hydrogen can combine with one atom of chlorine to produce a molecule of hydrogen chloride. Two atoms of hydrogen combine with one atom of oxygen to produce one molecule of water. (H_20). Atoms are therefore the "building blocks" from which the more complex molecules are made. A molecule is the smallest particle of any element or compound that normally leads a separate existance.

The molecules of many substances when dissolved in water do not tend to remain in units as whole molecules, but break apart again into the smaller pieces or atoms from which they were formed. These tiny pieces are electrical in nature and are composed of protons, neutrons and electrons which are the basic building blocks of all atoms. A proton may be considered as the fundamental unit of positive electricity and the electron as the fundemental unit of negative electricity. Neutrons bear no electric charge, being composed of one electron and one proton. An atom of an element is neutral, since it contains the same number of protons as electrons.

However, when molecules are dissolved in water and break apart into their smaller "units" or into atoms, these atoms either lose electrons or gain electrons from one another. They are then known as "ions," since they are no longer so called "neutral" atoms. An atom which contains equal numbers of protons and electrons is electrically neutral. When it loses an electron (negative charge) it is no longer neutral, since it then has an overbalance of one proton (positive charge). The atom, no longer neutral, is now termed an "ion" which bears a positive charge of plus one (+). If the atom loses two electrons, it is overcharged to the extent of two extra protons and therefore positively charged to the extent of plus two (+ +). Likewise, "neutral" atoms which gain electrons have an overbalance of negative electricity and are therefore negatively charged to the extent of minus one (—). If the atom gains two electrons, it is negatively charged to the extent of minus two (— —).

Hydrochloric acid in water may be used as an illustration. A molecule of hydrochloric acid in solution separates into one hydrogen ion which bears a unit positive (+) charge, and a chlorine ion bearing a negative charge of minus one (—). The following equation illustrates this reaction:

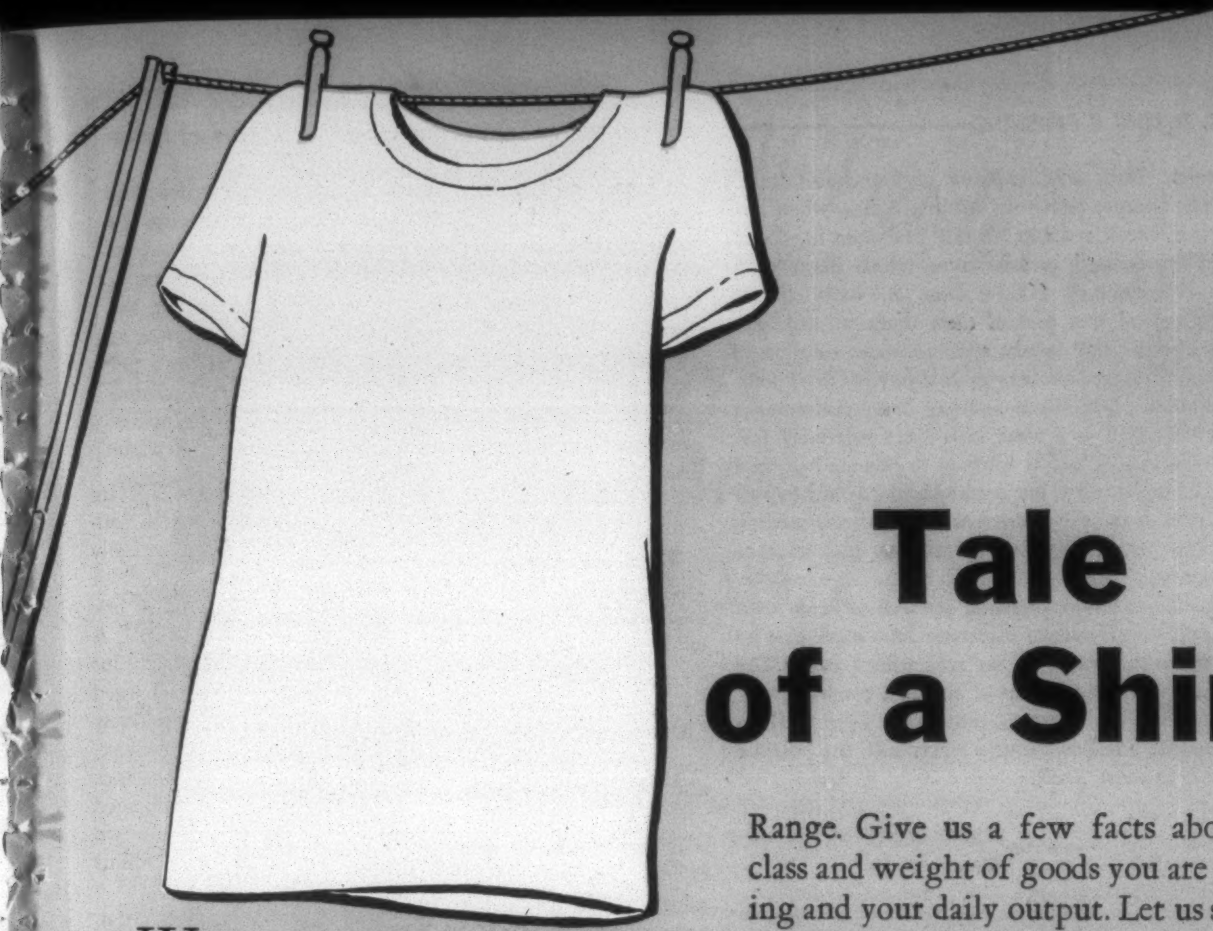
$$HCL \rightleftarrows \overset{+}{H} + \overset{-}{Cl}$$

A solution of hydrochloric acid, therefore, contains whole molecules of hydrochloric acid, hydrogen ions and chlorine ions, because some of the hydrogen atoms are always recombining to again form whole molecules of hydrochloric acid, while at the same time other molecules of the hydrochloric acid are dissociating into ions. These changes are going on constantly.

The breakdown or cleavage of molecules into ions is called ionization, and the substances whose molecules break apart into ions are known as electrolytes. Acids, bases, and salts are electrolytes. The molecules of most organic compounds such as sugars, starches and alcohols do not break apart into ions when in solution. These compounds are known as non-electrolytes, since they do not conduct an electric current when in solution.

From the above discussion, we may think of ions as being atoms that carry an electric charge. The word "ion" means "wanderer" since these minute particles are always in a state of rapid motion when in solution.

Acids may be characterized as being weak or strong, according to the relative number of hydrogen ions they produce in solution. All acids contain hydrogen as an essential constituent of the molecule. The great majority of the molecules of a strong acid will break apart in water solution to liberate large numbers of hydrogen ions. A weak acid will produce relatively small numbers of hydrogen ions, when dissolved in water. Hydrochloric acid, nitric acid and sulfuric acid are strong acids, since they yield such relatively large numbers of hydrogen ions, when dis-



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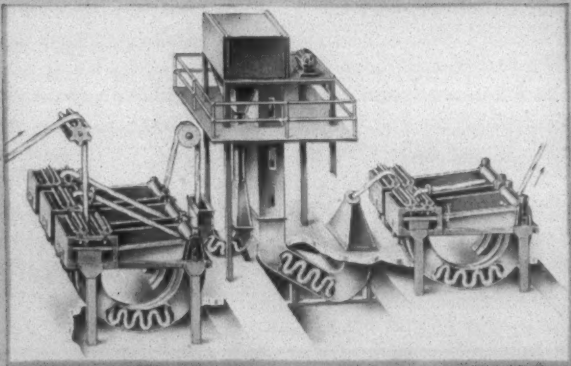

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solved in water. Boric acid, carbonic acid and acetic acid are weak acids, because relatively few molecules, when dissolved in water, break apart to liberate hydrogen ions.

Bases may be defined as substances which dissolve in water to produce hydroxyl (OH^-) ions. All bases contain this hydroxyl radical as a part of their chemical structure. A strong base is one that breaks apart in water solution to produce relatively large numbers of hydroxyl (OH^-) ions. Sodium hydroxide ($NaOH$) is a strong base. Ammonium hydroxide (NH_4OH) is a weak base since relatively few molecules break apart in water solution to liberate hydroxyl (OH^-) ions. The hydroxyl ion is composed of one atom of oxygen and one atom of hydrogen which are combined so firmly that they remain together in solution and act as a single atom or ion.

Salts are products of the chemical reaction of acids with bases. The following equation illustrates how a salt may be formed from the combining of an acid with a base. The positively charged hydrogen ions of the acid combine with the negatively charged hydroxyl ions of the base to form water. The negative ion of the acid reacts with the positive ion of the base to form a salt.

$$\underset{\text{Base}}{\overset{+}{Na}\,\overset{-}{OH}} + \underset{\text{Acid}}{\overset{+}{H}\,\overset{-}{Cl}} \longrightarrow \underset{\text{Water}}{H_2O} + \underset{\text{Salt}}{\overset{+}{Na}\,\overset{-}{Cl}}$$

The preceding discussion of acids, bases and salts serves as an introduction which explains to some extent what chemical changes take place in solution.

Hydrogen ions and hydroxyl ions are present in all aqueous solutions. If the hydrogen ions are greater in number than the hydroxyl ions, the solution is acid. If the hydroxyl ions outnumber the hydrogen ions, the solution is alkaline or basic.

The pH of a solution designates the hydrogen ion concentration of a solution or its degree of acidity or alkalinity. This designation was proposed by Professor Sorensen of the Carlsburg Laboratory in Copenhagen, Denmark. In the Sorensen system, the pH of 7 on the Sorensen scale designates neutrality. All pH values below 7 mean that the solution is acid. The lower the pH value, the greater is the hydrogen ion concentration. Alkaline solutions have pH values higher than 7. The higher the value, the greater is the hydroxyl ion concentration.

A brief review of logarithms will make the explanation of pH more concise. Logarithms are algebraic exponents applied to certain bases. The base of 10 is used in the pH system. The superscripts 1, 2, 3, 4 are logarithms in the following examples:

$$10^1 = 10 \qquad 10^3 = 1{,}000$$
$$10^2 = 100 \qquad 10^4 = 10{,}000$$

It can be seen that the superscripts or logarithms show the number of times 10 has served as a multiplier in the calculation of the values illustrated above. In higher mathematics the expressing of large numbers is more conveniently expressed in logarithmic terms.

Hydrogen ion concentrations, being so low in magnitude, would be difficult to express were it not for the pH system. If we have $\frac{1}{10{,}000}$ gram of hydrogen ions in one liter of solution, we can express this value as $\frac{1}{10^4}$ gram of hydrogen ions per liter. In order to eliminate the fraction, the denominator 10^4 can be brought into the numerator by changing the sign of the exponent 4 from plus (+) to minus (—) and we have 10^{-4} gram of hydrogen ions in one liter of solution. However, instead of expressing the hydrogen ion concentration per liter in algebraic terms as illustrated above, we simply say that the solution has a pH value of 4. Therefore, pH means a negative logarithm applied to the base 10 and indicates the grams of hydrogen ions in a liter of solution. When a molecule of water dissociates, hydrogen ions and hydroxyl ions are produced.

$$H_2O \rightleftarrows \overset{+}{H} + \overset{-}{OH}$$

There are as many hydroxyl ions produced as there are hydrogen ions. Since there is no excess of hydrogen ions over hydroxyl inos, the solution is neutral. The pH value of water is 7, which means there is one ten-millionth $\frac{(\quad 1 \quad)}{(10{,}000{,}000)}$ gram of hydrogen ions per liter. We may also express this value as $\frac{1}{10^7}$ or 10^{-7} or pH 7.

It was previously mentioned that an excess of hydroxyl (OH^-) ions over (H^+) ions in a solution would make the solution basic or alkaline. It was also stated that pH values between pH 7 and pH 14 indicated an excess of hydroxyl ions over hydrogen ions in a solution. Therefore, if we subtract the pH value from 14, we obtain the hydroxyl or pOH value of the solution. For example, pH 3 means that the pOH value is 11 ($14 - 3 = 11$).

$$10^{-11} = \frac{1}{10^{11}} = \frac{1}{100{,}000{,}000{,}000}$$

Therefore we have one hundred billionth of a gram of hydroxyl ions per liter, and one one-thousandth of a gram of hydrogen ions per liter.

$$10^{-3} = \frac{1}{10^3} = \frac{1}{1{,}000}$$

The solution contains a far greater quantity of hydrogen ions per liter and therefore is very acid in nature.

Measurements of pH are made by either colorimetric methods or electrometric methods. Colorimetric methods depend upon the changes of color by a series of indicators with change of pH. These indicators are colored organic compounds. Methyl orange produces a red color at pH 3.1 or less. At a pH greater than 4.4 the color varies through shades of orange. Prenolphthalein is another indicator which is colorless at pH 8 or less and a bright red color at pH 9.8 or higher. There are many other chemical compounds that change color depending on the pH of the solution. Sulphonphthalein compounds are widely used as indicators in colorimetric pH tests. In making a colorimetric pH test, the operator adds definite amounts of the indicator to a measured volume of the liquid being tested. The color produced is matched in tubes against a standard set of color standards. An approximate measurement is usually made first in order to detremine the proper indicator to use. The color standards contain a solution of definite pH value and also contain the indicator that covers the specified

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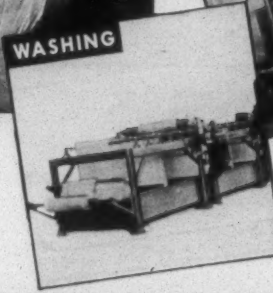
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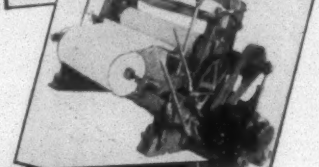
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Other colorimetric equipment such as the Hellige Comparator includes permanently colored match plates instead of liquid color standards.

Electrometric methods of pH determination are oftentimes preferable to colorimetric methods. Several types of pH meters are now available, that give a direct pH reading by simple immersing of the electrodes into the solution being tested. Operators can be quickly trained to accurately carry out pH tests on most of the pH instruments now being sold.

There also are several types of pH test papers being sold, that are often very helpful in making rapid pH tests of solutions. The paper is simply immersed into the solution and the color imparted to the paper is matched with one of a series of color standards that are usually printed in color on the container.

The stability of emulsions is oftentimes affected by the pH of the emulsion, or by the pH of the liquor from which an emulsion is applied. The advent of the many types of emulsions introduced to the textile finisher during the past decade makes the understanding and proper control of the pH a most important issue. It has been shown that the light fastness of dyed cotton is affected by the pH of the finished cloth (1). The control of pH in dyeing processes (2) has been reported in the literature as well as the control of the pH in bleaching (3). pH and detergency has also been discussed (4). It is an accepted fact that enzymes provide their most efficient action at definite pH values, a most important matter to be considered when desizing. In conclusion, it may be said that the value of pH control in textile dyeing and finishing operations will undoubtedly be practiced to a far greater extent in the years to come.

BIBLIOGRAPHY

1. Seibert, C. A., and Sylvester, C. A., *American Dyestuff Reporter,* 33, 311, 1944.
2. Noble, E. I., *American Dyestuff Reporter,* 34, 359, 1945.
3. Ridge, B. P., and Little, A. H., *American Dyestuff Reporter,* 31, 515, 1942.
4. Dole, W., *American Dyestuff Reporter,* 30, 231, 1941.

Silicones In The Textile Industry

By F. L. DENNETT, Dow Corning Corp., Midland, Michigan

MAN'S use of textiles for protection and decoration dates back to earliest history. Through the years the older fibers have been improved and new fibers have been developed until the textile industry ranks high in technical advancement and productive capacity among the world's industries. Much of the usefulness, quality and versatility of today's textiles are due to the special chemicals used in their production, and in their finishing. Silicones promise to be an important addition to this group of chemical specialties because of their water-repellency, chemical resistance and temperature stability. It has been my good fortune to have had the opportunity to work with silicones from the early beginnings of the manufacture of these materials in this country. The production of silicones is a very new industry and research on their usefulness in the textile industry is in its infancy.

What Are Silicones?

You are all familiar with the inorganic polymers of silicon such as quartz, glass and the mineral silicates. Silicones are polymers built upon the same silicon-oxygen-silicon structure found in these inorganic materials, but in addition they have one or more of a wide variety of organic groups attached to the silicon atoms. Thus you may say that we have a chemical hybrid. In reality the silicones do exhibit many properties which we would expect of such a hybrid. Their chemical inertness, stability to heat and excellent electrical resistance are derived from their inorganic origin while the exceptional water-repellency, ease of handling and variety of physical forms is a characteristic imparted by the organic groups. Silicone polymers are neutral and should not be confused with the acidic silicon chlorides or chlorosilanes which are only intermediates in the manufacturer of silicones.

Dr. F. S. Kipping, professor of chemistry at the University of Nottingham, England, and his associates were the first to work extensively with organosilicon compounds. The work was taken up in this country at the Corning Glass Works and at the Mellon Institute of Industrial Research in the hope of developing a temperature resistant resin as a complement for the glass cloth insulation used in the electrical industry. In 1945 the Corning Glass Works and the Dow Chemical Co. jointly formed Dow Corning Corp., which was the first industrial producer of silicones. Now there are commercially available some 80 silicone products, varying in physical form from resins, greases, and fluids, to rubbers, all based on the silicon-oxygen-silicon structure instead of the familiar carbon to carbon linkage.

How are Silicones Used?

The silicone which imparts durable water-repellency to fabrics is probably of the most immediate interest in the textile industry. Before we discuss this application, however, I would like to tell you briefly about other silicones which can solve some of the problems encountered in the industry.

First, let us consider the electrical resins and varnishes. Motors which are insulated with glass cloth impregnated with a silicone resin can be operated at temperatures 200° F. above present limits. They will give longer and more reliable service even when operated under more humid conditions and subjected to greater overloads than conven-

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tionally wound motors. Undoubtedly anyone who concerns himself with the operation of textile mills, synthetic fiber plants or bleaching, dyeing, printing and finishing establishments can think of places where the frequent replacement of motors causes loss of production, additional expense and inconvenience. Motors for spinning buckets in rayon plants, drives for boil-off ranges, dye jigs, washers, and developing boxes are only a few of the many places where silicone insulation may be of great usefulness. Other resinous silicones vary from materials which air dry, to those which require 250° C. for proper curing, and from materials which produce a hard thermoset film to those which give a very flexible coating. Some of these are used as vehicles for heat and weather resistant paints for use on exhaust stacks, flues, hot air ducts, ovens and similar equipment.

The wide variety of silicone resins, all of which have high moisture and oxidation resistance, indicates that other uses will certainly be found for them in the textile industry. Crease and crush resistance, shrinkage control and waterproof laminates are entirely within the realm of possibility. By using somewhat different starting materials and by carrying out carefully controlled cross-linking or vulcanizing, an elastic silicone material may be produced. Since these silicone rubbers are based on the afore mentioned silicon-oxygen-silicon structure they are also characterized by greater heat-stability and resistance to aging than organic rubbers. I should like to mention two uses of silicone rubber which may be of interest to you; first, as a coating and impregnant for glass, asbestos and organic fabrics and second, as a gasket material for a high temperature applications. Fabrics may be coated with a silicone rubber paste by doctoring, roller coating or spreading without the addition of any solvents. After the silicone rubber coating, the fabric will be water-repellent, flexible at either high or low temperatures, and resistant to aging, sunlight and oxidation. Fexible and heat-resistant laminations may be prepared by molding multiple layers of a fabric coated with a silicone rubber paste. Products such as these find application as conveyor belts for use in ovens, valve diaphragms, flexible hot air ducts and heat resistant gaskets.

Let us next consider the liquid silicones and their companion products. You will find this group of most immediate interest, since it embraces the silicone water-repellent which I mentioned in the beginning as well as lubricating fluids, high temperature greases and an antifoam compound. In general, the silicone fluids possess the water-repellency, heat stability, low freezing point, non-volatility and oxidation resistance that we have come to expect of these semi-inorganic materials. In addition to the above characteristics some of the liquid silicones are good lubricants under light to medium loads. These silicone oils are characterized by freedom from gumming, low volatility and heat stability to 500° F. They are recommended for machinery operating at high temperatures and high humidities such as tenter frames and dry boxes.

Ever since their introduction, the possible usefulness of silicones as water-repellent treatments for textiles has encouraged the development of a silicone liquid which could be padded onto cloth from an aqueous dispersion and which would impart durable water-repellency and desirable hand. Our first success was the permanent water-repellency imparted to glass fabrics and fine fibrous glass wool by methyl silicone fluid emulsions. Glass fabrics treated in such a manner have excellent water-repellency, an amazingly soft hand and drape, characteristic of the better organic fabrics. This treatment was not applicable, however, to organic textiles because of the high curing temperatures required to develop the maximum water-repellency of the silicone and to fix it to the glass surface. We continued the search and a new liquid silicone has recently been developed which can easily be applied to organic fabrics. This liquid silicone, known simply as DC 1107, is different from other silicones in that heating at relatively low temperatures develops its hydrophobing properties. This fact makes it possible for us to apply DC 1107 to fabrics such as wool, rayon, nylon and cotton without damage to the fibers.

DC 1107 is a very light, straw-colored, liquid silicone having a low viscosity, only slight volatility, and no acidity or alkalinity. On heating at 300° F. the liquid quickly polymerizes in and on the fibers making them water repellent. Water-repellency imparted by DC 1107 is resistant to dry cleaning solvents and to the action of water and detergents. The general properties of DC 1107 are given below:

Physical Properties of DC 1107

Viscosity at 25° C. in centistokes	10-20
Specific gravity at 25°	1.01
Weight in pounds per gallon	8.4
Acid number, less than	0.2
Flash point minimum °F.	225

Although DC 1107 may be applied from a solvent solution, most of our work has been done with an oil-in-water emulsion since this is adaptable to finishing equipment available in most mills. Experimental mill runs have shown that an emulsion of DC 1107 may be padded onto textiles and excellent hydrophobing developed with conventional drying equipment. In these mill runs an emulsion of DC 1107 was applied, by padding at room temperature, at a concentration designed to give from three to four per cent pickup of the silicone based on the original fabric weight. The silicone was fixed to the fibers and water-repellency developed by drying and heating for five minutes at 350° F. No final washing was necessary since there are no harmful acids, alkalies or salts in the emulsion. The emulsion does not have any effect on the color of fabrics. Additional work has shown that water-repellency may be developed more rapidly on the more heat resistant fabrics such as nylon by using temperatures upwards of 400° F. The rate of moisture removal does not appear to effect the final results.

Emulsions of DC 1107 are easily made by using a high-speed stirrer, an Eppenbach mixer or a colloid mill. A 50 per cent master emulsion is prepared by mixing the following ingredients at room temperature:

0.2%	by weight of glacial acetic acid
42.9%	by weight of water
6.9%	by weight of emulsifying agent
50.0%	by weight of DC 1107

One third of the total water plus the acetic acid and emulsifying agent are first thoroughly mixed. Then the DC 1107 is slowly added and the remainder of the water is finally mixed in to give a 50 per cent master emulsion. Containers used for mixing, storing or applying emulsions must

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Properly prepared, the master emulsion remains stable for a period of a month or more, but it must be stored in a vented container. The presence of water with the silicone causes a slow chemical reaction which solves a small quantity of hydrogen gas, but under normal conditions of storage and use, the efficiency of the DC 1107 is not impaired. Just prior to use the master emulsion is diluted with additional water at room temperature to a concentration such that three to four per cent pickup will be obtained on the fabric.

Textiles treated with an emulsion of DC 1107 and properly cured are odorless and have a soft full hand. They possess a high degree of water-repellency which is durable to dry cleaning and laundering. Since it is neither acid nor alkaline, DC 1107 does not weaken the fabric to which it is applied. Preliminary tensile strength data bear out this fact.

DC 1107 is one of the newest of our silicone products. Much remains to be found out about its properties. We are working steadily to gather as much information as we can to present to you. Our efforts are being supplemented by work in finishing plants.

Mr. Dennett's paper was presented before the April 7 meeting of the American Association of Textile Technologists in New York City.

A. A. T. C. C. Units Hold Spring Meetings

Two Southern sections of the American Association of Textile Technologists held Spring meetings this month. In following paragraphs are accounts of the meetings.

Piedmont Section—Held its spring meeting April 3 at Winston-Salem, N. C., the program being featured by two technical sessions on hosiery and cotton finishing. The hosiery discussion was led by Robert E. Smith of the High Point (N. C.) Chemical Mfg. Co., and P. E. Smith of Ware Shoals, S. C., an official of Riegel Textile Corp., led the cotton finishing discussions.

"Sheer fabrics such as marquisettes, voiles, ninons, dotted Swiss and nets are being treated with melamine resins in combination with alkyds or the thermoplastics to give the advantages of shrinkage control and better launderability, slippage control, durable crisp hand, stretch control, creaseproofing, better resistance to soiling, and remarkable lightfastness if pigments are combined in light shades," stated R. N. Fisher, technical service manager of American Cyanacid Co.'s textile resin department.

Especially important to this market, he continued, is the resistance of resin-treated sheers to disfiguring streaking and mark-off. He said some mills producing sheers have reported considerable increase in consumer use. Resin-finished Nottingham lace curtains and tablecloth fabrics are better able to withstand washing, are "crisp and resilient with a drapability and stabilization that lasts for the life of the fabric," Mr. Fisher said. Successful application of resin is dependent largely upon "the wisdom and skill of the technical people who apply it" and the kind of equipment used, he emphasized.

Development of new type resins, the melamine formaldehydes, considerably broadened the field, he said. An alkydated methylol melamine which may be applied satisfactorily to all fibers, including wool, rayon, cotton, linen and nylon, can be mixed with cold water in all proportions, and has "excellent storage stability." In method of application, this type of resin is similar to urea formaldehyde products, which until 1941 were the only types of thermosetting resins available for textile finishing, Mr. Fisher pointed out.

In Quartermaster Corps tests of the aspects of fiber and fabric construction in water-resistance, one fabric reported to have withstood "more than 30 times" as much rainfall as the present Army fabric of the same type, members of the Piedmont Section were told. At the same time the air permeability of this fabric, observed Raymond A. Pingree, chemical director of Warwick Chemical Division of Sun Chemical Corp., "is not materially less than the present standard."

A relatively new type of compound which may be classed as durable or semi-durable—depending upon the fabric to which is applied—has shown "good durability" on water-impermeable fibers such as cellulose acetate, nylon, vinyon and wool, with water-resistance retained "to a marked degree even after several launderings and dry cleanings. This compound is also being successfully applied to cotton and regenerated cellulose fabrics, where it has been found to possess durability characteristics intermediate between the renewable and durable treatments.

To adequately perform the water-resistant treatment, Mr. Pingree pointed out that three fundamental practices must be observed: "(1) The fabric must be properly prepared. Its surface should be free from impurities, since the fabric may contain quantities of water-soluble salts and insoluble pigment materials which might adversely affect the treatment. (2) Choice of the proper water-repellent is essential As fabrics seem to possess 'peculiar personalities,' a certain compound may be suited for viscose rayon goods while it may not be appropriate for cotton. (3) The water-repellent bath must be prepared according to best practice and optimum conditions of application observed. Complete penetration of the fabric is required. This is achieved easily either by the use of a three-bowl padder or by passing the goods through a two-to-four dip immersion box in front of the padder. A heavy nip is also preferable and aids materially in driving the water-repellent into the fabric and between the individual fibers."

South Central Section—Met April 10 at Chattanooga, Tenn. Principal speakers were Norman E. Barnes of the general engineering and consulting division of General Electric Co., Schenectady, N. Y., and Fred C. Schlemmer, manager of Peerless Woolen Mills, Rossville, Ga. Mr. Barnes addressed the technical session, using as his subject

Every color has its own "signature" as drawn by the spectrophotometer, said Mr. Barnes. The "signature" is a curve the instrument draws on a graph to show the percentage of light reflected, or transmitted in the case of a transparent material for various colors of the rainbow. The "signature" makes a permanent record. The records enable the matching of color and control of color. The textile industry is finding that through the use of the device the number of dyes used to get a certain shade may be reduced in many instances and this results in economy. Also the "signature" may be used to determine the type of color material used and the amount that has been employed, he said.

Declaring that uncertainties exist in affairs today, Mr.

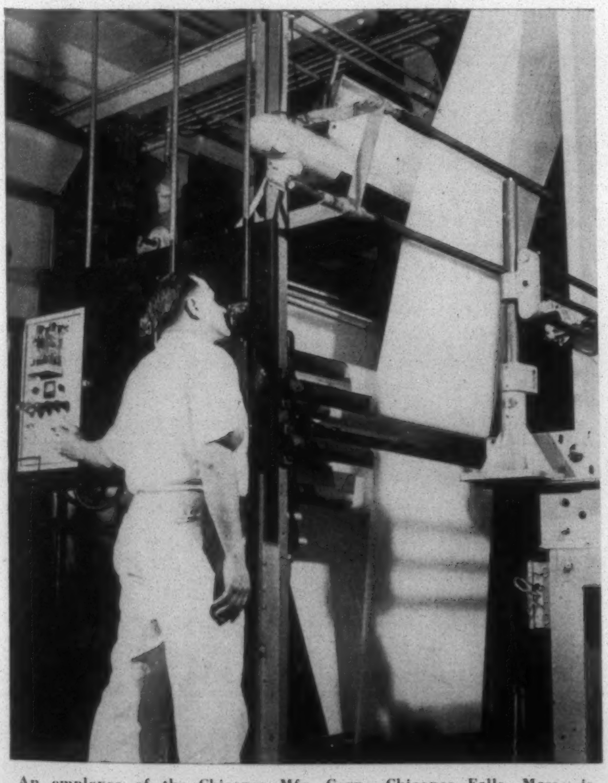
Schlemmer told the dinner gathering that technical men now have an added responsibility, that tof informing themselves of scientific and technical matters and making known their knowledge of vital matters to their fellow men. "The ABC of Color Spectrophotometry."

The technical program for the A. A. T. C. C. convention in Augusta, Ga., Oct. 21-23, has been released as follows: General Meeting, Oct. 21, 2:00 p. m.-5:00 p. m. Group Meetings, Friday morning, Oct. 22, 9:30 a. m.-12:30 p. m. and Friday afternoon, Oct. 22, 2:30 p. m.-5:30 p. m. Two group meetings will be held simultaneously. A cellulosic fibers group and a hosiery group will meet Friday morning, and a non-cellulosic fibers group and an auxiliaries and testing group will meet in the afternoon. A chairman is being selected for each group, who will conduct the meeting and lead the discussion periods.

Cloth Output Speeded By Electric Eye

Many new uses are being developed in America's modern textile mills for the photo-electric cell. In addition to more familiar chores like making counts and opening doors, the device has been adapted by research engineers to aid various textile machines in performing specialized jobs at high and accurate speed. Higher quality products are being turned out at greater speed as means are found to combine photo-electric cells with equipment at different stages in textile manufacturing.

At the Chicopee Mfg. Corp. plant in Chicopee Falls, Mass., for example, the phototube has been combined with an electronic hook-up to exert constant control over the weft-straightener machine. This machine consists of a series of rollers over which cloth passes on its way from bleaching bins to dryers. After the cloth has been bunched and twisted in the bleaching bins, straightening is necessary to assure that the filling yarns are at absolute right angles to the warp yarns.



An employee of the Chicopee Mfg. Corp., Chicopee Falls, Mass., is shown operating a weft-straightening machine equipped with controls activated by phototubes in combination with an electronic hook-up. The device is a great improvement over manual operation of the weft-straightener, which keeps the warp and filling yarns at right angles to each other as the cloth passes from bleaching bins to dryers. Photo-electric cell is discernible at top center, electronic control tubes on panel at left. These control a motor driving the guide or canting rolls (center) over which the cloth passes.—*(Photo courtesy Textile Information Service.)*

Until the photo-electric cell was put to work, an operator stood at this machine with his eyes glued on the fabric passing through, watching for any signs of "bias" or skewing. Whenever he saw the cloth start to run crooked or become distorted, he spun a crank to adjust the guide rolls in order to straighten it. This eye-straining task is now done faster, continuously and accurately by a fully automatic machine developed in the company's research laboratories. Two phototubes are installed on the weft-straightener, one at each side of the cloth. They react to light reflected from the weft threads of the fabric.

When the cloth is passing through evenly and the filling yarn is perpendicular to the warp, each tube receives the same amount of light. When a skew starts to occur, more light falls on one tube than the other—in fact, the difference in light reflected to opposite sides of the cloth actually gauges the amount of distortion. Current from the phototubes amplified by a D. C. amplifier is passed through a bridge which controls a motor in response to the difference in light received by the two phototubes. The motor tilts the straightening rolls in the proper direction to make the necessary correction in the alignment of the weft yarns.

As a result of this invention, Chicopee officials report that miles of cloth pass through the bleaching-drying system with a greatly reduced loss in seconds due to fabric distortion. The device is extremely valuable, they say, for straightening fabrics to be used for textile printing or cutting operations where it is necessary to have a perfectly true finished fabric in consumer applications.

Fourth Quarter Finishing Activity Analyzed

A total of 2,266 million yards of cotton, rayon, and other synthetic broad woven fabrics was bleached, dyed, or printed and finished during the fourth quarter of 1947, according to the Bureau of the Census, Department of Commerce. This total was 17 per cent greater than the amount finished in the third quarter of 1947, but was about the same as in the fourth quarter of 1946. The 17 per cent increase above the third quarter production can be attributed partly to the fact that the fourth quarter of 1947 was a 14-week period and also that the third quarter of 1947 included shutdowns for vacations.

The data were reported by textile plants which finish, bleach, dye or print cotton, rayon, silk, or other synthetic broad woven fabrics. All known finishers were canvassed. Approximately nine per cent of the total yardage was estimated for companies whose reports were not received in time for tabulation.

The statistics show that the 1,801 million yards of cotton goods bleached, dyed, or printed and finished was approximately the same as in the corresponding period of 1946, but was 17 per cent above the previous quarter. Rayon goods bleached, dyed or printed and finished totaling 466 million yards was five per cent higher than in the fourth quarter of 1946 and 16 per cent above the third quarter of 1947.

A total of 934 million yards of cotton fabrics was bleached and finished in the fourth quarter of 1947, compared to 897 million yards in the corresponding period a year ago. Almost all types of fabric showed an increase over the third quarter, with colored yarn fabrics, print cloths, tobacco cloth, cheese cloth, bandage cloth and gauze showing the greatest increases. A total of 32 million yards of 100 per cent filament rayon fabrics was bleached in the fourth quarter of 1947 which was eight per cent greater than in the third quarter of 1947 but approximately the same as in the fourth quarter of 1946.

The 449 million yards of cotton fabrics dyed and finished in the fourth quarter of 1947 was eight per cent less than the yardage of cotton fabric dyed and finished in the last quarter of 1946. All classes of fabrics showed an increase over the third quarter, with the greatest increases in drills, twills and jeans; flannels and other napped fabrics; poplins, repps and piques; sateens; and sheetings and tubings. The ten million yards of ducks dyed and finished in the fourth quarter of 1947 was 58 per cent greater than in the third quarter, but was 35 per cent less than in the fourth quarter of 1946.

The 418 million yards of cotton fabrics printed and finished in the fourth quarter of 1947 was almost the same as in the fourth quarter of 1946, but was 18 per cent above the third quarter of 1947. A total of 33 million yards of broadcloths was printed and finished in the fourth quarter, compared to 18 million yards in the corresponding period a year ago. Flannels and napped fabrics production of 20 million yards was 51 per cent greater than in the fourth quarter of 1946.

Approximately 16 per cent of the 983 million yards of cotton, rayon and similar goods was bleached and finished for women's and children's dresses and underwear; 13 per cent for men's and boys' shirts, pajamas and underwear; nine per cent for sheets and pillow cases; six per cent for draperies, curtains and upholstery fabrics; six per cent for industrial, mechanical and shoe fabrics; and the remainder for miscellaneous uses.

Thirty-four per cent of the 772 million yards of cotton, rayon and similar goods was plain dyed and finished for women's and children's dresses and underwear; 17 per cent for suitings, slacking and work clothing; 14 per cent for linings, interlinings and pocketings; 12 per cent for draperies, curtains and upholstery fabrics; and the remaining for miscellaneous uses. Approximately 60 per cent of the 512 million yards of cotton, rayon and similar goods was printed and finished for women's and children's dresses and underwear; 16 per cent for men's and boys' shirts, pajamas and underwear; eight per cent for bag goods; seven per cent for draperies, curtains and upholstery fabrics; and the balance for miscellaneous uses.

Pyroxylin Coating Activity Levelling Off

Pyroxylin spread in February totaled five million pounds, according to the Bureau of the Census, Department of Commerce. This total is approximately the same as the pyroxylin spread in January, but is 31 per cent below the 7.2 million pounds spread in February, 1947.

February shipments of 6.5 million linear yards of pyroxylin-coated fabric materials are four per cent above the 6.2 million yards shipped in January, but 23 per cent below February, 1947, shipments of 8.4 million yards. Shipments of 3.3 million yards of light cotton fabrics are 14 per cent above the 2.9 million yards shipped in January, but 27 per cent below the 4.5 million yards shipped in February, 1947. Shipments of two million yards of heavy cotton fabrics and 1.1 million yards of custom coating remained approximately the same as the January shipments.

Unfilled orders of pyroxylin-coated fabrics on hand at the end of February, amounting to 5.7 million yards, were the lowest since August, 1942. This total is 14 per cent below the 6.7 million yards on hand in January, and is 53 per cent less than the 12.2 million yards on hand at the end of February, 1947.

Color Card Association Re-Elects Officers

All officers and directors of the Textile Color Card Association of the United States, Inc., were re-elected for the ensuing year at the 33rd annual business meeting of the group held March 18 in New York City. Officers of the group are Roy E. Tilles, Gotham Hosiery Co., Inc., president; Armand Schwab, Armand Schwab & Co., first vice-president; John F. Warner, Riegel Development Laboratories, Inc., second vice-president; Carl E. Kempf, Brewster Hat Co., treasurer; and Margaret Hayden Rorke, secretary and managing director. Directors re-named are E. Irving Hanson, Allan C. Jacobson, Charles F. H. Johnson, Jr., Mr. Kempf, W. Ralph MacIntyre, James F. Marble, William B. Olmstead, Jr., Charles Pinnell, Mr. Schwab, Mr. Tilles, Henry C. Van Brederode and Mr. Warner.

In her annual report, Mrs. Rorke cited the continued large growth in the association's membership both here and abroad. During the combined fiscal year of 1946 and 1947, the period covered by the report, the association gained 861 members, she revealed. Of these firms, 535 are in the United States and the remainder in Canada and 28 other foreign countries.

Survey Shows Large Glycerine Use

According to a recent survey made by the American Association of Textile Chemists and Colorists at the request of the Glycerine Producers Association, glycerine's most important use in the textile industry is in printing. In this study, and indicative cross-sectional view of glycerine utilization by cotton and rayon dyeing, printing and finishing plants was obtained through questionnaires sent to a selected list of firms and individuals. One hundred and forty responses were received.

Analysis of the information given in these questionnaires shows that the responding companies use 1,262,565 pounds of glycerine during the year covered by the reports. Government figures for 1941, the last "normal" pre-war year, place glycerine consumption in textile processing for that year at 2,827,000 pounds. Since there are more than 800 cotton and rayon dyeing, printing and finishing plants in the country, comparison of these figures would indicate a greatly increased all-over glycerine consumption by the textile industry during the last few years.

This statistical breakdown also shows that printing and finishing account for the use of approximately 90 per cent of all the glycerine reported. Thus 1,062,710 pounds of glycerine were used in printing, with 60,110 pounds going into textile finishing. Substantial quantities of glycerine were also employed in sizing, dyeing and miscellaneous applications. Noteworthy is the use of 37,725 pounds of glycerine as alkyd resin applications. The employment of glycerine-utilizing alkyd resins represents a rapidly expanding field of application in textile processes.

Forum Covers Chemical Market Research

Representatives of 120 American and Canadian chemical companies met in Boston, Mass., April 8 for a joint session on chemical market research sponsored by the Chemical Market Research Association and Massachusetts Institute of Technology. Organized for development of economical uses of America's chemical resources, the association co-operates with various government agencies in clarifying the types of information which are most helpful in appraising trends in the chemical and related industries, both with respect to existing products and new products.

Chief speaker of the session was Georges F. Doriot, professor of industrial management at Harvard University. Speaking at the evening dinner meeting at the Copley-Plaza Hotel, he discussed "Is American Business Worrying About the Right Problems?" Alex Bavelas, assistant professor, M. I. T. Department of Economics, discussed the psychological aspects of interviewing. What industrial marketing research can learn from consumer research experience was the topic of Ross M. Cunningham and Gerald B. Tallman, associate professors of marketing at M. I. T. Horace S. Ford, treasurer of M. I. T. Corp., spoke on "Market Research as a Guide for Venture Capital."

The afternoon session was conducted by John J. Healy, Jr., assistant general manager of the Merrimac Division of Monsanto Chemical Co. Richard B. Schneider, staff member of Arthur D. Little, Inc., spoke on "Some Major Areas of Industrial Marketing Research." Development of an industrial market for a new chemical was the subject assigned to Lauren B. Hitchcock, vice-president of the Quaker Oats Co. He discussed his company's problems and methods in the sale of a new product, Furfural, which is finding increasing application in the chemical industry, particularly as a solvent. Robert F. Elder, vice-president of Lever Bros., discussed the use of market research in top policy planning.

A. I. C. Silver Anniversary Program Set

The Silver Anniversary meeting of the American Institute of Chemists will be commemorated at a meeting on May 7 at the Waldorf-Astoria Hotel in New York City. The afternoon program will feature an address by Dr. Foster D. Snell, retiring president, followed by a panel of speakers on the theme, "The Professional Activities of Other Societies." Charles C. Wilson, assistant to the secretary, will present the activities of the American Institute of Electrical Engineers; Dr. W. A. Mosher, head, Department of Chemistry, University of Delaware, will outline the work of the American Chemical Society; E. Lawrence Chandler, assistant secretary, will review the program of the American Society of Civil Engineers, and W. T. Nichols, technical assistant to the executive vice-president of Westvaco Chlorine Products Corp., will cover the professional activities of the American Institute of Chemical Engineers. The institute will then hold its annual business meeting and elect new officers.

The evening program features a joint meeting and dinner with the New York Section of the American Chemical Society, and the presentation of the institute's gold medal to Dr. Charles Allen Thomas, executive vice-president and technical director of Monsanto Chemical Co. and president of the American Chemical Society. Francis J. Curtis, vice-president of Monsanto, will speak on "The Career of the Medalist." Dr. Snell will present the medal.

Army Describes Current Research Projects

The development of better water-repellents and shrink-resistant treatments are among current textile research projects sponsored by the U. S. Army Quartermaster Department, according to a report now on sale by the Office of Technical Services, Department of Commerce. The report which describes current areas of research in the textile field by the Quartermaster Department was prepared by Lieut.-Col. S. J. Kennedy, and Capts. R. D. Weeks and S. Becker. The authors believe that "branches of the textile industry concerned with research will be interested in this survey."

Of the 13 objects discussed in the report, nine are fundamental studies of fibers, fabrics and finishes. These include studies of textile resistance to wear, water, shrinkage, mildew and fire, studies of dyeing and finishing, chemical and photochemical degradation of cellulose, classification of textile properties, and development and interpretation of test methods.

Experiments are being carried out to improve water-resistance with pyridinium compounds, resin wax emulsions and silicone resins which were found to be effective water-repellents during the war. Studies are being made of compounds which lend not only water-resistance but also impart mildew, fire and shrinkage resistance. Attempts are also being made to improve the uniformity and fastness of colors in military clothing.

In the past, the report explains, the Army has not participated to any notable extent in textile research and has relied on standard commercial products to meet the Army's textile needs. Experience in equipping soldiers for fighting under all kinds of weather extremes, however, revealed an urgent need for more durable and more functionally efficient fabrics. Some improvements were made during the war, but many of the studies undertaken at that time have yet to be completed before an adequate body of scientific data is available. The report describes the background and present status of each research project for the current fiscal year. Each description is accompanied by a chart showing the organization of the research in detail.

Mimeographed copies of the report (PB-86249, *Areas of Quartermaster Research in Textiles*, 43 pages) sell for $2. Orders should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order payable to the Treasurer of the United States.

The first synthetic dye of commercial importance was porduced in 1856.

In 1914, only ten per cent of the dye consumed in the United States was produced in this country.

Materials Handling

Co-ordinating Traffic With Materials Handling

By W. BERT WATSON

LESS than a half-century back it was common belief that the frontiers of America had disappeared and that American economy had reached ultimate heights. We are now slowly coming to the realization that no matter how far we progress in our technology the frontiers will ever be remote and mysterious. If all possible new ideas were by some strange medium to be made known to us we would likely even then never reach the final goal in our study of the refinement of our knowledge.

Materials handling began with the creation of the world, and from the earliest days of life on this planet was a vexing problem. It led to creation of the wheel and this in itself was such an advanced step that any further great strides seemed unnecessary. Surely so simple a matter of conveying an article from here and there required no special knowledge, no scientific refinements could be used in this field, no research would pay for itself; and so for centuries man made no progress but took for granted the losses incidental to transporting the materials of industry.

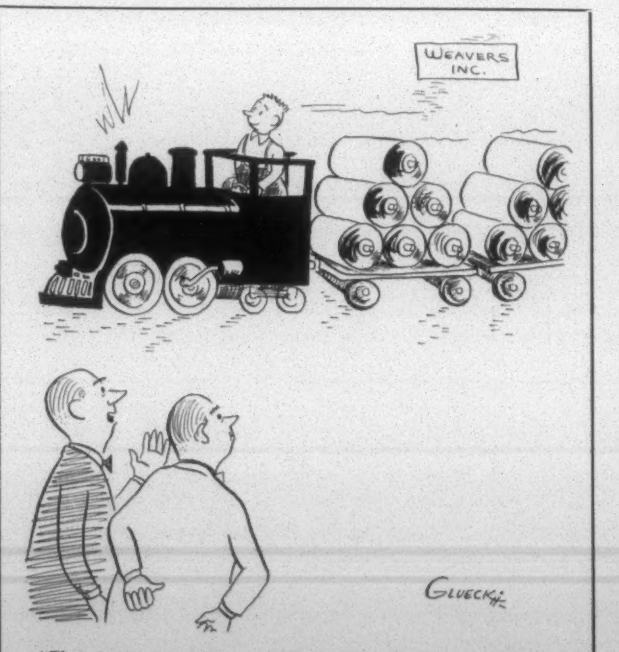
A few years ago these losses loomed as a very important factor in industrial economics and thought commenced to stir in the minds of industrial executives, and expanded into a program for the development of new methodology. We are only pioneering in mechanical materials handling despite the centuries of experience in this field. We do not know today what tomorrow will bring, so should not accept as the zenith of development the methods now in use. They seem advanced beyond measure as compared to those of even so short a time back as the days of World War I. The general awakening is only beginning. A wide region stands before us awaiting exploration, so we must proceed with full comprehension and proper perspective of the project if we are to develop materials handling to its fullest potential. We must not make any step so conclusive that our methods become inflexible and unadaptable to change and future progressive measures. To create at this time a general pattern in industry which would be expensive to alter to the more progressive methods that tomorrow is certain to bring, would be our most tragic error. All through history the human race has suffered and progress toward the finer ways of life has been retarded because of inability to economically refine established constructions. Industry is now making great strides and will continue steadily along this road of progress in the study of mechanical handling. Much study, research, and accomplishment will now come rapidly. I have no intention of dealing with the technical aspects of materials handling within any plant or warehouse but our past experience shows conclusively that any changes in industrial methods soon reach the shipping or traffic departments and either create there some vexing confusion or else fit in the picture—dependent upon the extent of thought and study given to the problem.

Modern materials handling, packaging and palletization lose effectiveness and fails of economics unless properly adapted and fitted smoothly into the shipping and receiving of freight by any means of transportation. Materials handling inside any plant or warehouse becomes a study to be made on the ground, of all facilities involved. Such matters as aisle space, floor strength, heights, nature of commodities, and type of mechanical equipment are not a fixed proposition but require special engineering study and accurate cost accounting. This phase of mechanized materials handling is receiving much favorable publicity and has been adequately covered in many meetings, magazine articles, etc. The engineers in industry and the specialists representing manufacturers of mechanical transporters have produced volumes of figures which have convinced industrial management that we have a wide open field for unlimited progress in handling methods. We have but to continue our explorations. When these matters are all considered and certain conclusions reached on the basis of cost, flexibility of operation, and practicability, the study must not terminate until all angles of transportation to the ultimate consumer or to proper locations of materials received in our plants are fully and carefully studied.

At this point shipment to the customer enters the picture. We will not and cannot realize all possible economies and operating efficiency unless we consider as a major part of this study how our mechanized handling will co-ordinate with shipping from our plants to the customer's plant or warehouse. Before the conclusion of any materials handling study in any industry is given the final reading by top management, the traffic department should be certainly consulted. The furtherance of all the benefits of any work on mechanizing handling in any plant will be expanded to a surprising degree by alert traffic officers. Intra-plant and warehouse handling too often lacks co-ordination when the material is ready to be shipped. Every efficiency goes into the operation up to that point and then neglect to consider how it could be extended into more economical shipping leaves many desirable features unattended. We box, package, palletize, bin load, or rack material for storage and then handle the articles individually into the shipping vehicle. Why, if economy and flexible operation is enhanced by mechanical handling from machine to warehouse cannot it be carried by the same means right into the railway car, truck, or ship, and still further desirable results and economies be obtained?

To accomplish all the desired results we must consider adapting the use of any bin, rack, pallet, or skid to extend beyond our own warehousing and if possible to ship to final destination on the unit instead of handling to the shipping vehicle the individual packages. This will reduce handling and loading costs by 25 per cent to as much as 90 per cent, depending upon facilities and the commodity. Under any program where storage and handling is accomplished through the use of pallets, bins, racks, skids, etc., and transportation is effected on these same units, damage in transportation can be reduced and even eliminated. Transit damage is a very vital concern to the entire population of our countries and affects the economic picture very adversely. This cannot be stressed too much, and while the American railroads alone show freight loss and damage claims increasing from $15,000,000 in 1933 to $95,000,000 in 1946, a terrific loss, it by no means represents the entire loss by rails alone, to say nothing of other means of transportation where similar startling loss figures are revealed. This tragic waste affects production, commodity prices, transportation rates, and reduces purchasing power, thus affecting our national economy to the extent that action tending to reduce this loss must be undertaken for the general welfare of the country as well as to sustain the profits of industry (rather than to let it price itself right out of the market) and retard inflationary tendencies. Our determination to effect more fluid operations in industry through the use of mechanized materials handling can easily be continued a step further to create greater economies and to aid in cutting down the transit damage bill. Our pallet or skid should be made to adapt itself to continuous movement from the production line to the customer and even beyond him if necessary. It should be so constructed that it fits readily into any point for intra-plant use and subsequent movement to any warehouse location or storage space, thence to the railway car, truck, ship, or airplane dependent upon which of those means of transportation is chosen.

These factors require some study, but after all are really quite simple problems. They reduce themselves to a matter of structural design to achieve the desired result of minimum size, strength and weight of the unit used. If this be a platform, pallet, skid, bin, box, or rack, it should be so designed that it will fit into the shipping vehicle in such manner that vacant space is minimized and need for blocking and bracing reduced to the lowest degree. This in itself offers a field for further economy. These units must be constructed to carry sufficient load and give the commodity complete protection against damage at any stage of its use. It must stack easily and with economy of space, and be readily handled with the equipment available. Its design must avoid any tendency to make it cumbersome and awkward to handle. Strength should be built into the unit without creating excess weight or size.



"That design ended all our difficulties in keeping men on that job."

If sizes are more or less standardized and uniform, and affected areas are so arranged in most plants to use standard sizes, it will be possible to start some research on the problem of returning pallets directly to your own plant or a plant in your vicinity under load, and so avoid return empty pallet shipping cost. This is not so important for special racks as these should be of such size and design as to best suit the commodity. Proper exploration in the field of modern materials handling must extend beyond the mere use of pallets into many special carrying devices which will permit handling of multiple units rather than single units. These also must be of size, construction, and design to be readily adaptable to shipping and to fully protect against damage.

Just as during the recent war we learned that we faced defeat unless all knowledge and resources were pooled and unless competitive enterprises shared ideas, we must now realize that progress in modern materials handling is dependent not upon one man or a couple of departments in any industry. Instead, it is not only desirable but is the duty of the traffic manager of any concern to interest himself in the materials handling problems of his company. Materials handling is only another way of saying "traffic." The proper and economical way of moving something from here to there is our specialty. Our responsibility does not start only when the order to ship comes to us but rather has its beginning all the way back where the raw material is purchased, and extends through all processing and on to final acceptance of our product by the consumer. During these steps we find that problems relating to traffic exist and any firm failing to have its traffic specialists study said problems in an effort to achieve a balance between the relation of complete or partial manufacture, crating, boxing, packaging, palletizing in its many ramifications, and actual shipping, will not attain the complete efficiency and economy which is possible. Recent years have witnessed great strides in coordinating traffic with materials handling. There is no reason why an unlimited exchange of ideas cannot prevail and the present trend continue with resultant benefits for everyone. Thank you for your kind and patient attention.

Abstract of an address at the Conference on Materials Handling held concurrently with the National Materials Handling Exposition at Cleveland, Ohio, in January. Mr. Watson is traffic manager for H. J. Heinz Co. of Canada, Ltd., Leamington, Ont.

Publication of *Some Basic Techniques in Materials Handling,* a report of the proceedings at technical sessions of the Conference on Materials Handling in Cleveland last January, has been announced by Clapp & Poliak, Inc., management of the National Materials Handling Exposition. It may be obtained for $1 from Clapp & Poliak, 350 Fifth Avenue, New York 1, N. Y.

Lightning Protection For Textile Mills

by JAMES T. MEADOR

THE 1947 National Electrical Code has this to say regarding lightning arresters (Article 280, Section 2801): "Lightning arresters shall be provided in industrial stations in locations where thunder storms are frequent and adequate protection against lightning is not otherwise provided."

Since the majority of us who read the TEXTILE BULLETIN are situated in an area of the country subjected to an average of 40 storm days per year with an approximate number of 13 lightning strokes from each square mile of sky, it certainly is to our advantage to make some observations regarding the most effective protection possible that we can provide for our plants against both direct strokes and surges due to indirect lightning strokes.

Proper protection against lightning involves protection against surges to machinery and apparatus and sometimes against direct strokes to buildings and electrical circuits. The usual industrial-type, low-voltage circuits operating at less than 1,000 volts can be protected as adequately against lightning as the higher-voltage transmission lines and generally with less protective equipment. The source of power of a transformer supplied from a transmission or distribution circuit must be safeguarded as well against outages from either direct strokes or other surges.

Lightning discharges produce voltage in buildings, masts, trees, and from transmission lines or other circuits to ground in two general ways. If lightning strikes a structure, the stroke current flows in the structure, and produces voltage depending on the character of the current and the electrical impedance of the structure. In an object of high impedance such as a tree or masonry, or in a transmission line, high voltages are developed. Damage such as physical rupture, fire or flashover sometimes results. In conductors of low impedance, the voltage between electrically adjacent points will be much lower and no damage will result. Surge voltages can be caused in electrical lines when lightning strikes nearby without actually contacting the wires. Such voltages are limited in magnitude but can cause considerable damage to low-voltage equipment such as found in the average industrial plant.

Methods of industrial lightning protection depend largely upon whether the buildings are of high electrical impedance such as wood or masonry construction or whether they are largely of metal that offers good electrical conduction. Plants can be separated into two principal groups from this standpoint.

Buildings of Wood or Masonry

If a building of wood or masonry is struck by lightning the material imposes high resistance to the flow of lightning current. This produces high voltage and the result may be shattering of the wood or masonry and flashovers from the roof or building frame to metal connected or coupled to the earth such as water pipes, machine frames, or circuits. This has been experienced often in the shattering of chimneys, the stripping of shingles from roofs, flashes inside of buildings, etc. Sometimes this results in fires. The over-all probability of a given building being struck may be relatively small, depending on its area, its height, and its exposure to lightning. Furthermore, because of variations in intensity of strokes, lightning might strike a building without causing damage. Protection is required for those cases where trouble may ensue.

Low-voltage circuits in such buildings are definitely exposed to voltages that may be dangerous to the utilization apparatus, whether the circuits are wholly contained in the building or pass outside of the building. If they are wholly contained within the building, the probability of trouble is decreased, but the circuits are still subject to disturbances if the building is struck or if lightning strikes nearby. Such circuits, if they are of considerable extent or if they supply electrical equipment, require lightning protection.

Lightning can be prevented from striking buildings and other structures by shielding with rods, masts, or overhead wires electrically grounded. Strictly speaking, it is not possible to eliminate entirely the hazard of an object being struck except by surrounding it completely with a grounded metal enclosure. However, by proper shielding, the probability of the object being struck is reduced to a negligible quantity. Good shielding is achieved when, of 1,000 strokes terminating at the object or its shield, 999 are dissipated by the shield and only one gets through to the object. This is 0.1 per cent exposure.

It is of some interest to speculate on the probabilities of a building being struck. From data that has been obtained in field research, it has been concluded that in regions of about 30 thunderstorm-days per year, there are about 9.5 strokes from each square mile of sky area. In the region of the Carolinas, with some 40 storm-days per year, the figure is about 13 strokes as mentioned before. Structures of appreciable height will attract strokes from an area that extends beyond the structure by distances equal to about 3½ times the height of the structure. On this basis, a building 100 feet square and 25 feet high in level terrain where the number of thunderstorm-days is 40 would be struck approximately 0.036 times per year or about once in every 28 years. These figures are average and will be influenced by local conditions. With a mast in the middle of the building projecting 55 feet above the roof or with four masts, each

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15 feet in from the corner and projecting 15 feet above the roof, the building itself would be struck once in 10,000 years although the masts might be struck once every ten years.

There are many arrangements of rods, masts, or overhead wires that give the same degree of shielding. It is entirely feasible to give a structure a high degree of protection against lightning strokes by economical methods. The basic principles laid down by Benjamin Franklin, now amplified by accumulated laboratory and field data which were denied to him, are still valid. Failures of lightning rod systems in the past were mainly due to improper location of rods and lack of proper grounds. A high-resistance ground on a lightning rod is a source of danger. High lightning current flowing through this resistance produces voltages that may cause flashovers from the rods to other metallic objects such as electrical conductors.

The major problem in industrial plants is not so much the protection of the buildings themselves but rather the protection of the many motors and control devices connected to the electrical circuits. The first step in safeguarding this electrical apparatus is to keep lightning voltages off the supply circuits. These circuits vary in vulnerability, depending upon how well shielded they are, thus:

(1) Circuits completely contained within well-grounded metal buildings will generally not require protection from lightning.

(2) Circuits completely contained within buildings that are adequately shielded by rods or masts will not require protection if the circuits are of grounded, metal-sheath cable or in conduit. Open wiring in such buildings requires protection.

(4) Circuits that pass outside of the buildings—unless the outdoor circuits are in metal sheathed, grounded cable should be protected regardless of the type of building because lightning disturbances can originate on the outside sections and then enter the building.

Arresters and capacitors should be installed wherever the circuits leave the building. If the circuits in the building are radial, the remote ends of the circuits should also be equipped with arresters to prevent the building up of voltage by reflection at the end of the line.

The protection advisable in a plant where the circuits pass out of the buildings in open wiring is illustrated. It is assumed that the plant is located in a region of high lightning frequency and intensity. Overhead ground wires have been shown. These may be necessary if the outside circuits are of any extent, for the chance of wires being struck is by no means negligible. Transmission line systems receive, on the average, one stroke per mile per year. Thus a line 500 feet long may be struck once in ten years. The frequency may be more or less dependent on local conditons. A direct stroke on a low-voltage circuit may cause considerable havoc, and where there is serious risk of direct strokes, ground wires or some forms of shielding should be considered. The most important factors in the location of ground wires are:

(1) They must be placed so that they and not the power circuits will be struck.

(2) Sufficient insulation or spacing must be maintained between the ground wires including their down leads and the power circuits to prevent back flashes to the circuits when the ground wires are struck.

(3) Ground resistance of the down leads must be low.

In general, if the three wires of the circuit are close together, a single ground wire three to four feet above the circuit will provide good shielding. Three or four-foot clearance should be maintained between the ground wire and its down leads and the power circuits. If the circuits run over a metal roof which may carry lightning currents and are insulated only with small insulators, it may be necessary to increase the insulation in order to avoid back flashes. This can be done with wood in addition to the regular line insulation.

The need for ground wires depends on local conditions. Past local experience is usually a good guide to whether they are warranted. Sometimes shielding objects are already

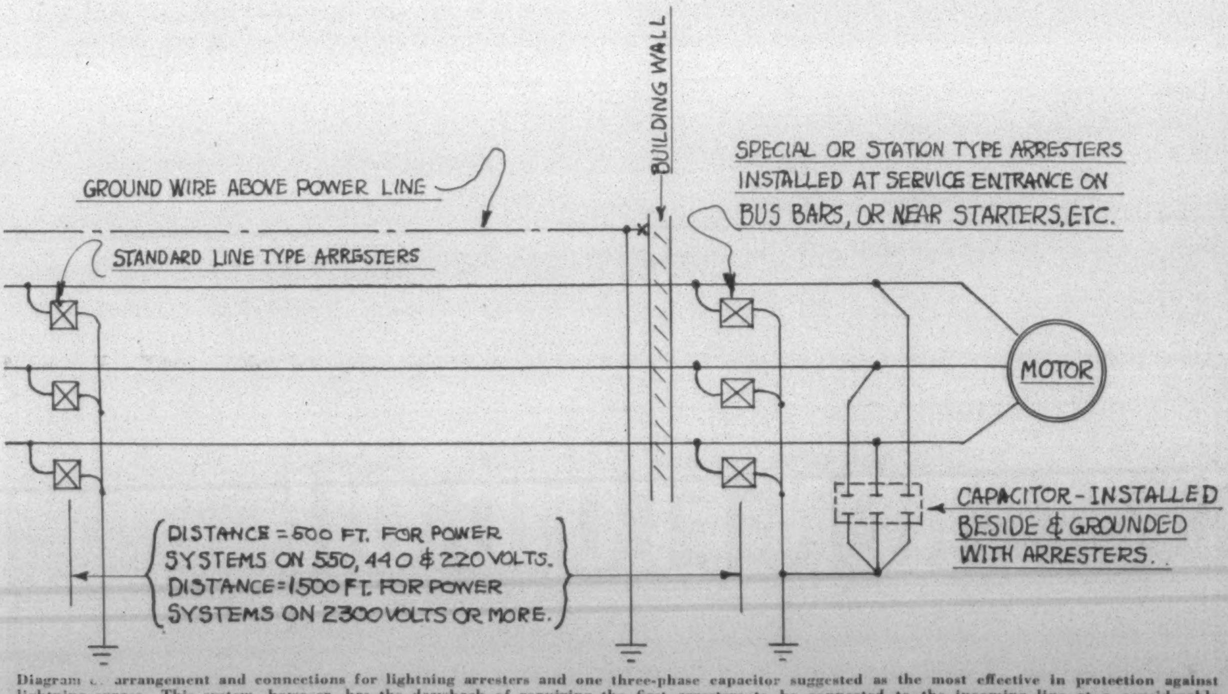
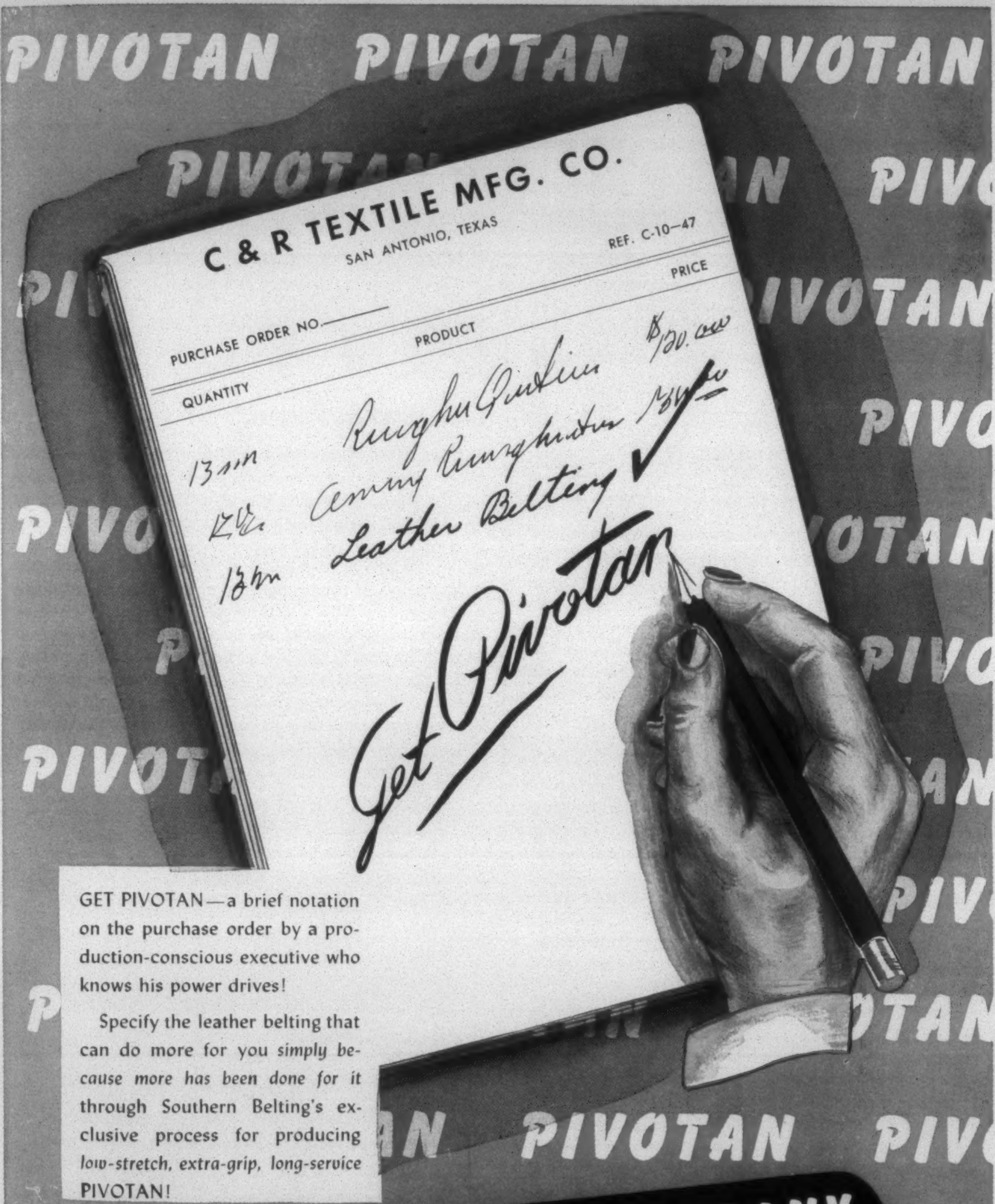

BUILDING WALL
GROUND WIRE ABOVE POWER LINE
STANDARD LINE TYPE ARRESTERS
SPECIAL OR STATION TYPE ARRESTERS INSTALLED AT SERVICE ENTRANCE ON BUS BARS, OR NEAR STARTERS, ETC.
MOTOR
CAPACITOR - INSTALLED BESIDE & GROUNDED WITH ARRESTERS.
DISTANCE = 500 FT. FOR POWER SYSTEMS ON 550, 440 & 220 VOLTS.
DISTANCE = 1500 FT. FOR POWER SYSTEMS ON 2300 VOLTS OR MORE.

Diagram of arrangement and connections for lightning arresters and one three-phase capacitor suggested as the most effective in protection against lightning surges. This system, however, has the drawback of requiring the first arresters to be connected to the incoming line at a considerable distance out from the switchboard room or power entrance. For this reason, this system is not usually applied, as the outlying arresters are omitted.



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present, such as smoke stacks with lightning rods or grounded water tanks. These can be used to advantage.

Frames of motor and switchgear should be connected to a good ground such as a water pipe system and all lightning arrester grounds be tied to the same ground. For the down leads from ground wires, there should be separate driven or buried grounds and these should be connected with the plant ground.

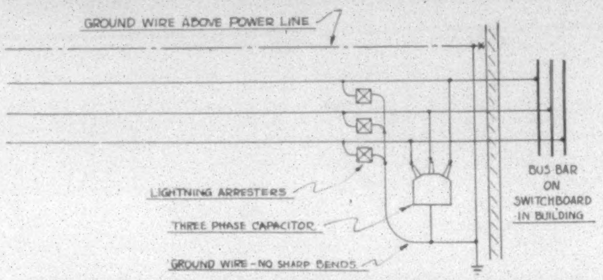

GROUND WIRE ABOVE POWER LINE
LIGHTNING ARRESTERS
THREE PHASE CAPACITOR
GROUND WIRE - NO SHARP BENDS
BUS BAR ON SWITCHBOARD IN BUILDING

Diagram of the most generally used system where the arresters, with either a three-phase capacitor or three single-phase capacitors, are mounted and connected to the incoming line at the service entrance to the building.

Relatively low lightning voltages can be dangerous to connected motors that may have impulse strength as low as three to four thousand volts crest. Insulation of rotating machines is exposed to damage in two ways. High voltage from winding to frame may damage it, or voltages between turns may cause turn-to-turn failures. Surge voltages caused by lightning may rise at very rapid rates, and when penetrating motor or generator windings, the rapid rate of change causes voltage between turns. The quicker the change in voltage, the higher the voltage between turns. In order to protect a machine, both the voltage to ground and the rate of rise of voltage applied to the machine terminals must be controlled. The voltage to ground can be limited by lightning arresters, and the rate of rise of voltage is limited by capacitors connected from the machine terminals to frame and ground. Since each has its distinct purpose, both devices must be used in parallel for adequate protection of motors. Lightning arrester protection alone is sufficient for the control and switching equipment unless its insulation is deteriorated or otherwise inadequate in which case the only remedy is replacement.

For the most effective protection, the best practice is to install the protective devices as close as possible to the apparatus to be protected. This is the rule especially for systems where the apparatus is more or less widely separated. In industrial plants, such as textile mills for example, there will be many motors on a circuit located fairly near each other. The combination of lightning arrester and capacitor will protect several motors except for very severe disturbances which should be guarded against by direct stroke shielding.

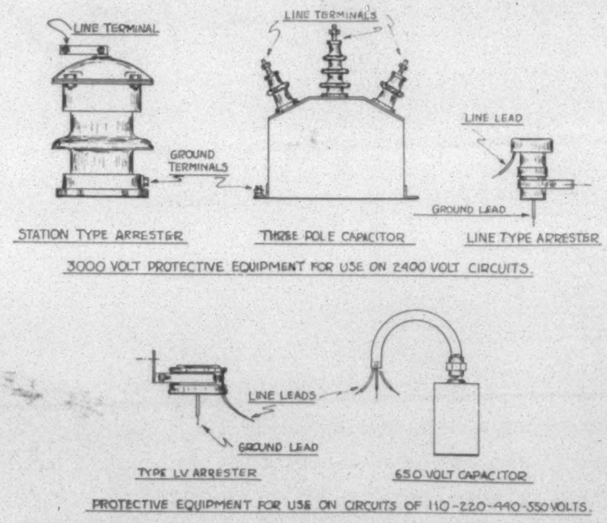
Buildings Largely of Metal

This includes all-metal buildings with roof and walls electrically well connected and grounded, and buildings with metal roofs and masonry walls with metal reinforcing electrically well connected and grounded. Such structures may be struck by lightning but there is little risk of any physical damage or fire because the lightning current is conducted to ground through the metal without causing high voltage drops in the structure. Structures like the Empire State Building in New York and other skyscrapers are struck frequently without anyone in the building being conscious of it. A metal enclosure such as a steel building or an automobile is a safe place to be in a lightning storm. It is important that the metal parts be well connected together so that no high voltages or actual sparks develop that might cause damage. Electric circuits wholly contained in such buildings can be said to be practically free of dangerous overvoltages either from direct hits or from induction from nearby strokes.

If the circuits pass outside of the building, they may be struck by lightning or raised in potential by induction from nearby strokes. These voltages will then get inside the building by way of the wires and may cause trouble. Such circuits should have lightning protection as discussed previously.

General Lightning Protection

Circuits in industrial plants require lightning protection to safeguard the utilization equipment such as motors and switches. This protection consists principally of lightning arresters and capacitors, located at several points. Theoretically, the best protection is obtained with the protective devices located at each piece of apparatus. Practically all industrial plants where motors are not far apart, adequate protection is provided with protective devices located at points where surges may enter the circuits and at the remote ends of the circuits. Buildings can be protected from being struck by properly placed rods, masts, or overhead wires grounded to adequate grounds. Such shielding of buildings decreases the hazard of high lightning surges in the circuits.



Showing lightning arresters and capacitors for both 2,400-volt and 110-220-440-550-volt circuits. Note that only three-phase capacitors are shown; they can, however, be had in single-phase types also, for any voltage class.

Transformers that supply power to the plant should have adequate lightning protection. However, lightning protection on the transformers alone will not insure protection to the plant equipment.

You can see that there is a lot of room on this subject for some variation of opinion among mill men, as a whole. Therefore, it seems, the best way of bringing this matter down to our level is to give some examples of successful treatment of this problem by men who have been sorely plagued by such troubles in the past.

The most notable of these cases was the Locke Cotton Mills at Concord, N. C., where Joseph Little, master mechanic, was living a miserable life of troubles, trials and tribulations, such as motors and starters being burned out by surges coming in on his electrical system when there were only a few thunder clouds in that part of Cabarrus County. His lightning arresters were supposedly in good shape, while his operating voltage in the card room, spinning room and opening room was of the 2,200-volt class. The balance of his plant, that is, weave rooms, winder rooms, etc., was operated on 550 volts, and gave no trouble whatever. Since the change-over of all 2,200-volt equipment to 550 volts, rewiring the plant from the Duke Power transformers to the last distribution panel in the mill, and the installation of new lightning arresters with capacitor for this low voltage (550 volts), he has enjoyed peace and security ever since.

This brings out a fact that has been impressed upon our minds by the many, many cases of such nature at the numerous mills whose operating power was 2,200 volts—a 2,200-volt circuit is so easily vulnerable to lightning surges of all magnitudes, whereas, a mill operating on 550 volts suffers very little, if any, from such surges on account of the protective action of the power transformers. This, however, takes into account that there is adequate shielding or overhead ground wire protection from the transformer station into the switch room of the mill.

Another example of a somewhat different nature was that of the Adrian and Madora Plants of the American Yarn & Processing Co., Mt. Holly, N. C. Here, Duke Power Co. supplied the power at 550 volts, directly from its bank of three 1,000-KVA, 13,000-volt (primary) transformers to the delivery pole in the Adrian Mill yard, approximately 100 feet south of the building in which the switchboard was

Photograph showing Dawson Warren (right), master mechanic, and Carlyle Chandler, superintendent of the Adrian and Madora Plants, American Yarn & Processing Co., Mt. Holly, N. C., standing beside the delivery pole for their electric power, from which the feeders run to both mills. In the background can be seen the feeder line to the Madora Mill with the grounded shield line overhead that has been so satisfactory in preventing troubles from lightning.

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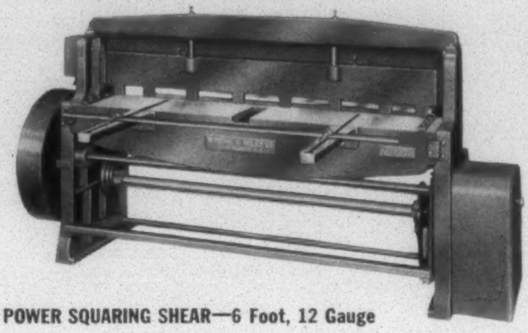

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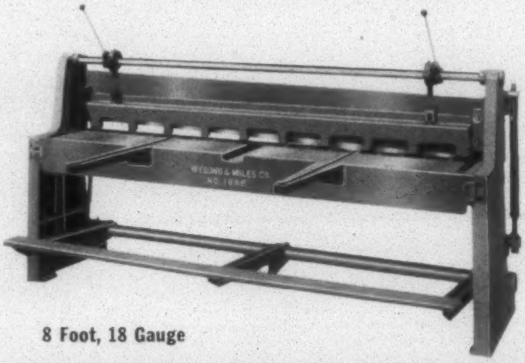

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located. From this delivery pole the feeder circuits to both mills were installed, the one to the Adrian Plant going straight across the yard, while the one to the Madora Plant took a westerly route around the end of the Adrian building, crossed the P. & N. Railway, and entered the switchboard room on the north side of the Madora Plant, a distance of approximately 1,200 feet. Shutdowns and burnouts due to surges were too numerous for comfort. Dawson Warren, master mechanic, made a study of his situation and decided to do something about it, with the result that he installed an overhead ground wire above the cables on the feeder circuits to both mills. That was in 1942, and since then he has had no further trouble. This overhead ground wire was connected with the ground by means of a driven ground (eight-foot copper rod and No. 4 weatherproof wire in ground mold) at each pole, thoroughly salted down with 50 pounds of salt, and enough water to soak it in completely. The earth was hard, red clay, which was good, for, if there had been only a cinder fill or loose earth fill, those grounds would have been no good.

An example of the benefits that might be derived from other methods of shielding of electric circuits in and around plant operations is the Rush Plant of American Yarn & Processing, where the 550-volt service line from the transformer bank to the mill building passes within six feet of an elevated tank (approximately 50 feet tall). Since the plant was started in 1943 there has not been a single outage or burnout due to lightning surges. The same experience has been the case at the Woodlawn Plant of the same organization.

There is another matter on which there seems to be a general agreement of opinion among mill men, and that concerns the renewal or replacement of lightning arresters every year, or before the beginning of each lightning season. George Watson, electrical engineer for Kendall Mills, with general offices at Paw Creek, N. C., very definitely thinks that this is a most important consideration, especially if the immediate locality has been subjected to some direct hits, or even near misses.

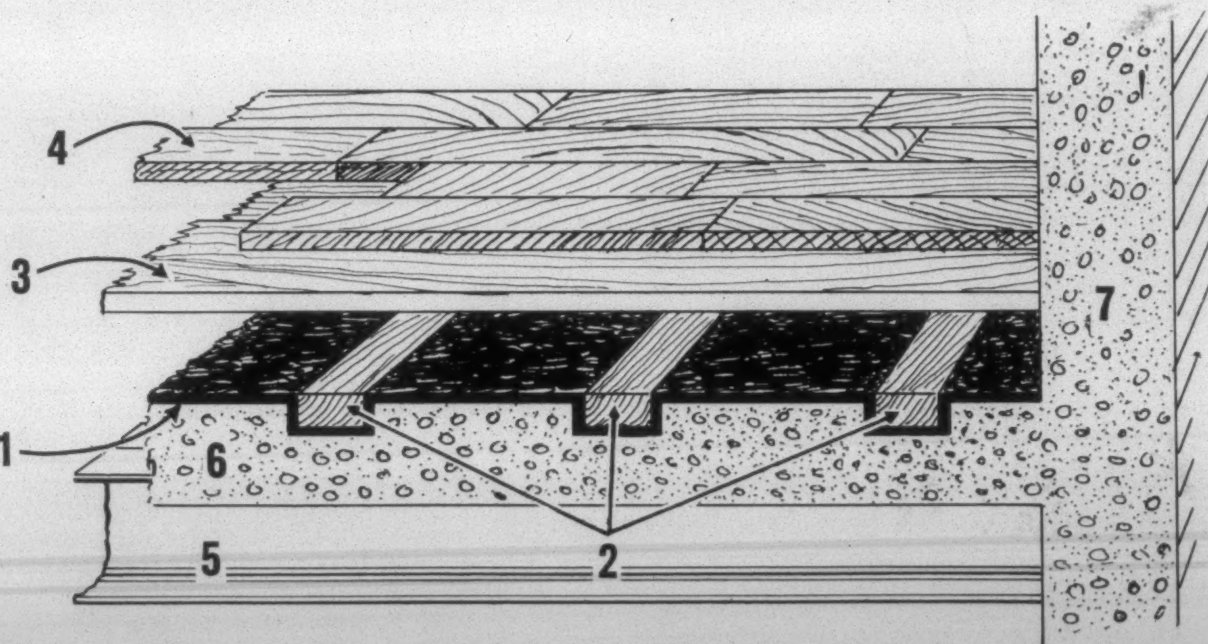
In this issue the author breaks into his regular series, "The Electrical Code And Textile Mill Wiring," to give his readers this timely article on lightning protection. Since April and May are the primary lightning months in the South, this discussion is presented with the sincere hope that it will be of some benefit to those in charge of plant protection and maintenance.

Concrete Floors For Weave Rooms

By C. J. McCORMACK, Maintenance Engineer

FOR many years there has been strong opposition to constructing textile mill floors, especially weave room floors, out of concrete. This is, more or less, the result of traditional ideas of mill construction based upon allowing certain vibration activities of the looms to control the basic idea of construction. In other words the buildings were built to suit the looms, because of their vibration while weaving, instead of building the structure to allow full unity strength in every detail of the building.

The reason many mills find it necessary to re-inforce the entire structure from the outside is because the floors never have been an integral unit of the building rigidity, or strength. The floors were installed to allow certain separation from the walls because of the anticipated vibration



(1) Special mastic cushioning on concrete surface and on the bottom and sides of the slots; one-quarter to one-half of an inch deep. (2) Two-inch by four-inch studding imbedded in slots after applying the mastic; studding is eight to 12 inches apart and parallel. (3) Subflooring of treated lumber for nailing finished flooring. (4) Finished flooring nailed to subflooring.

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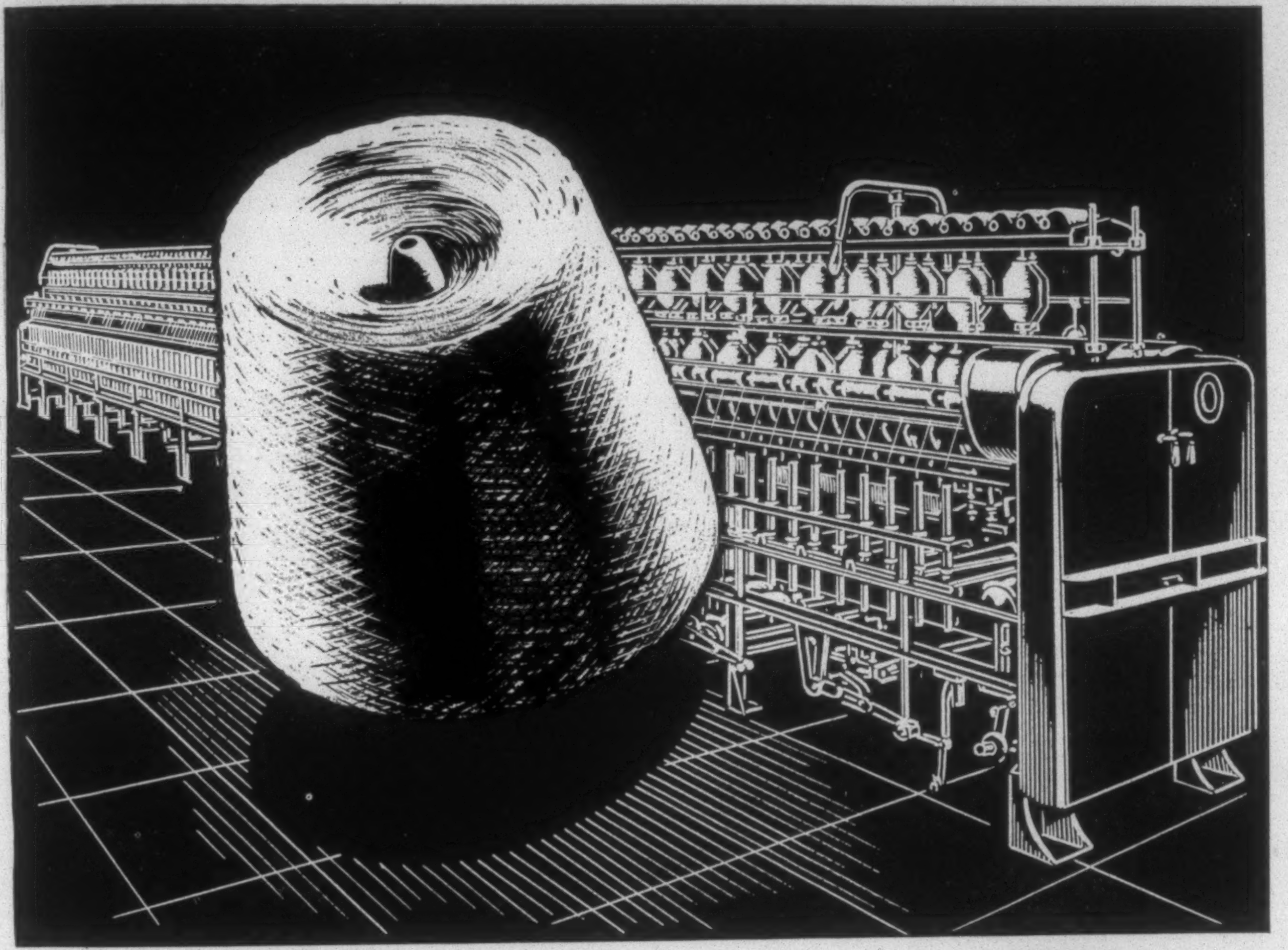

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activity of the looms. Another phase was the results of dust floating up from constant foot traffic and wearing out the bearings. This dust, although hardly perceptible, is unhealthy for the workers and has an adverse effect on any and all mechanism it finally rests on. In addition to this, concrete has no ability to absorb vibration. This would, naturally, cause considerable cost for upkeep and cause an early replacement of the loom. Because of years of operation the building will eventually be a "shell" of walls and roof with the floors being held up by numerous posts, pillars or columns which take up a great deal of valuable space in any weave room.

The engineering and the materials used in the old-type textile mill are of the highest type and grade, otherwise many of the older mills would have been down long ago. In fact, many of them have become safety hazards after the years they have been operating. By using brick and re-inforced concrete with proper surfacing of the floors, the building will last longer, have a higher market value and can be used for many other purposes, and will elongate the life of the machines being operated in it. Such a building would be safer, more sanitary and be a "one piece" job, regardless of the number of floors in the structure.

Free Floor Space

Today the textile mill can be built of re-inforced concrete, or bricked walls and re-inforced concrete floors without fearing the effect of vibration on the machinery operating in the mill. It would allow much more open space in the rooms by eliminating the need for many of the posts, etc., usually used to hold up the floors above. Further than this, the matter of water seepage is also eliminated, thereby offsetting much dry-rot of lumber, and floor slippage to workers.

The accompanying sketch shows the method suggested for use of concrete floors. After the concrete has been poured and dried, the special "cork like" mastic is trowelled on the concrete one-fourth inch to one-half inch in thickness. This mastic is fire-resistant to 1,700° for many hours. It is also waterproof and no water or moisture can seep through. On top of the mastic the treated sub-flooring can be nailed to the two by four-inch studding and the finished floor then has sufficient nailing space to be laid properly over the sub-flooring.

The studding is placed in slots that are allowed in the pouring of the concrete. These slots can be placed parallel every ten to 12 feet apart after the mastic has been applied to the floor as well as to the bottom and the sides of the slots. The mastic will find the proper level, regardless of the contour of the concrete surface, and will allow the floor to be level and firm. The mastic in the slots would permit the studding to be imbedded without the use of nails. The mastic is firm, will not allow any "waves" but will follow the level of the sub-flooring which, in turn, assures a good level job for the finished flooring.

Felt Cushions Used

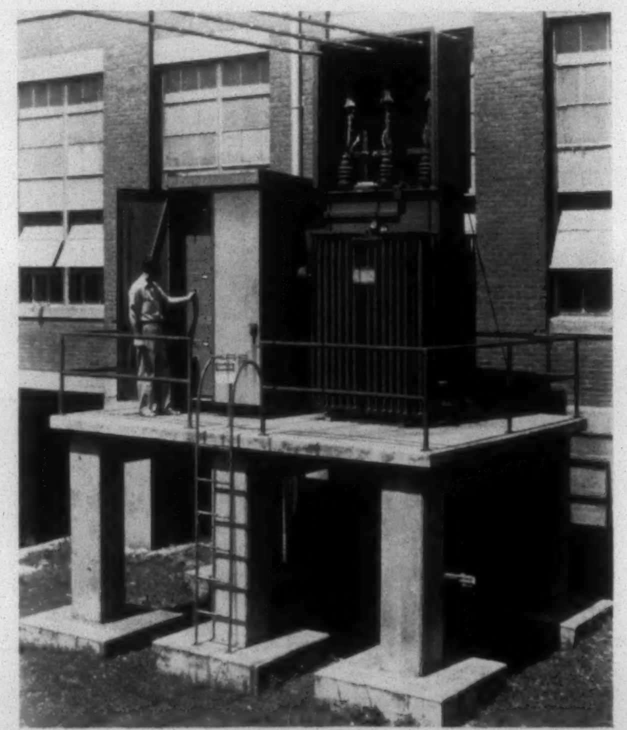
Placing recently accepted felt shock absorbers under the base of the looms, plus the suggested build-up from the concrete, not only assures a long life for the looms, but eliminates many of the headaches of determining when the shock absorbers have become compact sufficient to be replaced.

Another valuable result of using concrete floors, is that the finished flooring may be replaced without affecting the strength of the building. Should the looms be moved out of a room, designed as suggested in this article, the slots could be filled with concrete after the flooring had been removed. Another feature is the cost of construction would be lowered because the structure could be of any number of stories, and the weave room could be on any floor level. Instead of spreading a mill over several acres, two or three stories can be used with a minimum of roof area. The design is also useful for construction of mill village homes, or private homes, with very little change, except in the finished floor.

Steam pipes and other piping can be exposed, and this alone is an advantage over having them imbedded in the flooring. There is no chance whatever of water seeping through to a lower floor and, in case of fire, it would be confined to the floor on which it occurs and would not expose the entire structure to possible destruction.

Outdoor Substations Allow Increased Output

An increase in production, a 50 per cent reduction in line losses, and a saving of 75 per cent in installation costs have resulted from the installation of two General Electric 1,000-kva, outdoor-type, load-center unit substations at a large Southern textile mill. A third unit of the same rating will be installed soon. According to the textile company, these substations have increased production by eliminating shutdowns for repairs and providing the mill with dependable and continuous service.



An operator throws the switch of the 1,000-kva outdoor load-center unit substation.

The electrical engineer of this mill group said that with the old distribution system, it was necessary to replace contacts on oil-circuit breakers, clean the tanks, and renew the oil in them twice a year. All of this work had to be accomplished on an overtime basis on week-ends, when the mill was not operating, which resulted in considerable extra expense.

These co-ordinated substations are located in small, out-of-the-way areas near the load. Feeders average from only 200 to 250 feet in length compared with feeders of 800 to 1,000 feet required by the old distribution system. Line losses have been reduced as a result and constant, accurate voltage regulation is obtained. The substations are equipped with drawout-type circuit breakers which can be interchanged readily.

These substations are located outside a section of the mill built over a creek bed which heavy rains flood almost every Spring. To protect the substation during these flood periods, they are mounted on 13½ by 16-foot reinforced concrete bases raised about ten feet above the ground. Protection for the top bushings of the substations is provided by a three-sided metal screen. The equipment is totally enclosed and kept locked at all times, thus assuring safety to the personnel.

All power for this mill is purchased and is delivered to the two new outdoor substations and a conventional-type indoor substation, having three 667-kva, single-phase, Pyranol-filled transformers, at 11,000 volts, 60 cycles, three-phase. From the new substations, each one of which has five feeder circuits, and the indoor substation, which has eight feeder circuits, the power is stepped down to 600 volts for distribution inside the mill. The three-shielded, single-conductor cables, rated 15 kv, leading to each unit substation are suspended on messengers and feed the transformer through conventional cover bushings.

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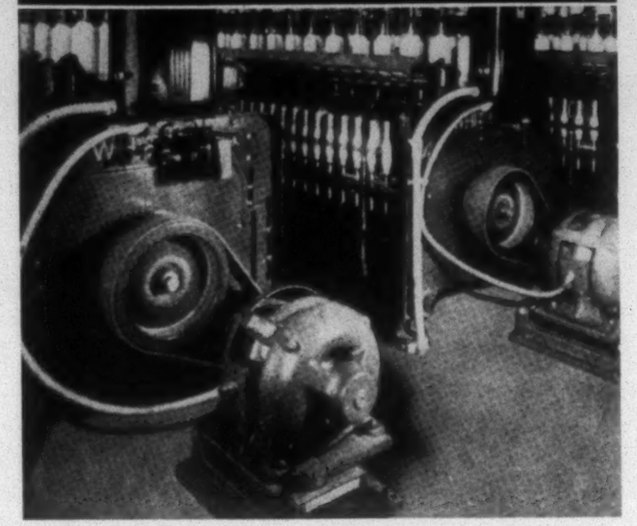

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

NEW YORK, N. Y.—Directors of American Viscose Corp. at their regular meeting April 7, declared dividends of $1.25 per share on the five per cent cumulative preferred stock and 50 cents per share on the common stock, both payable May 3, 1948, to stockholders of record at the close of business on April 20, 1948. Net earnings of $18,520,000 for 1947, equal, after preferred dividends, to $8.47 per share of common stock are reported. This compares with $11,863,000 for 1946, or $5.86 per share of common stock.

NEW YORK, N. Y.—Consolidated sales of $124,776,023 for the year 1947 compared with $112,951,887 for 1946 were reported by Textron, Inc., in a statement issued April 7. Consolidated net earnings for 1947 after minority interests and appropriation of $2,000,000 for contingency reserve amounted to $6,316,575. The statement also announced the purchase by Textron, Inc., of all outstanding shares of Textron Southern, Inc., Class A stock for a price of $2,455,200 in cash and $2,325,000 in subordinated ten-year 4½ per cent debentures. Textron Southern operates plants in Charlotte, N. C., and Anderson, S. C.

NEW YORK, N. Y.—For the first quarterly period, Nov. 1, 1947, to Jan. 31, 1948, J. P. Stevens & Co., Inc., reports consolidated net sales of $63,175,852. Consolidated net earnings for the same period after provision of $5,050,000 for Federal taxes and after provision for minority interest are estimated at $7,789,828, equivalent to $2.25 per share on the 3,459,989 shares outstanding.

MACON, GA.—Atlantic Cotton Mills has deed a tract of land to the Rebecca Baptist Church of Bibb County. George W. McCommon, mill president, signed the transfer.

SPARTANBURG, S. C.—Montgomery Textiles, Inc., with headquarters in New York City, has taken over the distribution of products of Spartan Mills. Deering Milliken & Co., Inc., previously represented Spartan. Under this move all products manufactured by mills headed by Walter Montgomery will be distributed by one selling agency. Concentration of the selling of products of Spartan Mills and Beaumont Mfg. Co., Spartanburg, and Startex Mills of Tucapau, S. C., through Montgomery, rounds out a plan originally set in motion about five years ago when the latter company was formed.

ASHEVILLE, N. C.—Viscolin Fibre Mills, Inc., with authorized capital stock of $10,000, has been chartered to deal in textile products. Incorporators are G. J. Nord, R. Gumpert and Mrs. Ida Belovin, all of Asheville.

BIRMINGHAM, ALA.—Net earnings of $2,196,165, after all charges and income taxes, was reported by Alabama Mills, Inc., for the year ended Dec. 31, 1947, at a recent annual meeting of stockholders. This compares with a net profit of $1,197,073 for 1946. Net sales for 1947 totaled $20,531,672 against $18,952,911 for 1946. Paul A. Redmond, Jr., formerly assistant to the president, was elected executive vice-president and A. H. Randall, formerly general superintendent, was named vice-president in charge of operations.

NEW YORK, N. Y.—Riegel Textile Corp. showed slightly less net income on $52,637,508 of sales in 1947 than it did on $44,400,368 of sales in 1946, according to the company's annual report, mailed to shareholders April 5. Net income in 1947 amounted to $4,719,871 and in 1946 it was $4,766,513. The company's working capital was $10,734,960 at the end of 1947, compared with $10,223,117 at the end of 1946.

GAFFNEY, S. C. — Hamrick Mills and Limestone Mills, wholly-owned subsidiaries of M. Lowenstein & Sons, Inc., New York City, have been consolidated into one company and will be known as Limestone Mfg. Co. They will continue to operate under the same management in all respects, it is reported.

RAMSEUR, N. C.—Brady Mfg. Co., Inc., has been chartered to deal in textile products. Authorized capital stock is $40,000 with $300 stock subscribed by H. F. Brady, Sue Brady and Julian Brady, all of Ramseur.

LAURINBURG, N. C.—A handsome new employee manual entitled *You and Your Job* is being distributed by four affiliated textile concerns in the Laurinburg area: Waverly Mills, Inc., Morgan Cotton Mills, Carolina Rugs and Scotland Mills, Inc. The booklet was designed to acquaint both new and old employees with mill regulations and policies. The guide book was prepared by L. B. Singleton, personnel director of Waverly Mills, working in co-ordination with Bradham & Co., advertising agency of Greensboro, N. C.

SPRAY, N. C.—The woolen mill of Fieldcrest Mills closed operations April 9. All the stock has been run out and the all-wool blanket unit is being moved to the blanket and finishing mills. Some of the remaining machinery and supplies will be used at other mills and the rest will be offered for sale. No plans have been announced as yet for disposition of the building.

EASLEY, S. C.—Two new gymnasiums and recreation centers are being completed for Easley Cotton Mills at Easley and Liberty, S. C. The following men have been made full-time athletic directors for all Woodside plants as follows: A. M. Fraser at Liberty, Red Owens at Easley, Jack Brasher at Simpsonville and Fountain Inn, S. C., and James Collins and James Hendrix for Woodside in Greenville, S. C. Other news from plants in the organization follows: new opening room machinery has been installed at the Woodside Cotton Mill Co. plant in Greenville; a basement is being placed under the plant at Easley and when completed new spinning frames will be installed at a later date; a one-story addition is being constructed at the No. 3 Plant at Liberty. This new addition will house the present weave room equipment which is now on the second floor and more spinning frames will be added when the present looms are moved to the first floor of the new addition. For experimental purposes, the No. 3 Plant has ordered ten Kellogg looms.

SPARTANBURG, S. C.—Approximately 200 looms of Arkwright Mills No. 2 Plant at Camp Croft are scheduled to go into production late in May. Full production with 300 looms is planned by the end of the year. Forty-inch broadcloths will be woven.

LOWELL, N. C.—I. Rogosin of New York City, owner of National Weaving Co., Inc., and Beaunit Mills, Inc., has donated land to be developed into a recreation center for Lowell citizens. The land is located in the geographical center of Lowell and is readily accessible to all citizens.

SLATER, S. C.—Slater Mfg. Co., Inc., a division of J. P. Stevens & Co., New York, is installing 221 new 50-inch XD Draper looms at a cost of more than $250,000. The older E. Model looms are being moved to another plant in the Stevens chain. J. A. White, general superintendent, is in charge of the installation work.

GREENWOOD, S. C.—Records in the office of the Secretary of State, Columbia, reveal that capital stock of Greenwood Cotton Mills has been increased from $261,500 to $15,690,000.

GREENSBORO, N. C.—Pomona Mfg. Co., which since last May has been undergoing a $500,000 renovation and expansion program, is now in full production of a new product. The firm is now producing fine carded cotton yarn-dyed dress goods for women's and children's apparel. The former product was dress goods made from blends of wool, cotton and other materials.

SPINDALE, N. C.—Stonecutter Mills Corp. has announced completion of an agreement for purchase of the land and building of Mil-Art Co., Inc., and are considering how best to use the property which they expect to be in possession of by the middle of May. Approximately 30,000 square feet of floor space will be added to the Stonecutter organization by purchase of the Mil-Art plant.

GREENVILLE, S. C.—Judson Mills officially became a part of the Cotwool Mfg. Corp. last month when stockholders voted to merge the mill, as a separate corporation, into the Cotwool Corp. The merger will not cause any changes in management or policies, officials announced. In the future the plant will be known as the Judson Mills Division of Cotwool Mfg. Corp.

MONROE, GA.—Walton Cotton Mill Co. is installing air conditioning units throughout the entire mill.

ATHENS, GA.—The Athens Mfg. Co. is adding two new wings to its present office building. The new additions will house

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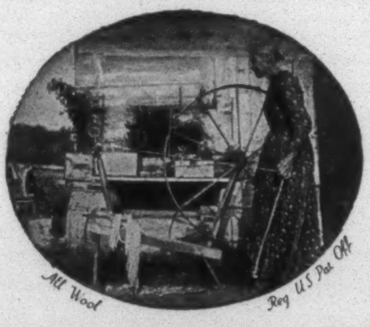

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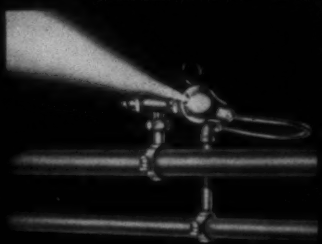

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some of the offices that are at present located in the mill building.

Juliette, Ga.—Juliette Milling Co. is completing installation of air conditioning equipment at its plant here. About May 1 the firm will install new machinery in the opening and picking room.

Marianna, Ark.—Plans are being formulated for establishment of a 5,000-spindle plant to be set in operation within the next few months. The mill would process local cotton and manufacture yarn for the knitting and hosiery industry in numbers from 7s/1 to 30s/1.

Greenwood, S. C. — More than 200 members of the Quarter Century Club from Greenwood, Mathews and Ninety Six Mills were honored at a banquet here last month. Service pins were distributed representing more than 6,000 years association in the textile industry.

Stony Point, N. C.—Worth Spinning Co. recently has installed the following new equipment: two winders, one high-speed warper, eight cards, and a new vacuum stripping system. A new elevator also is being installed to handle cotton to the opening room.

Raeford, N. C.—American Wringer Co., Woonsocket, R. I., has made known plans to operate a subsidiary plant here to produce rubber thread. In the process raw rubber and cotton yarns are combined to make thread used in stocking tops, girdles and other items. A local company, the Hoke County Development Corp., is making arrangements to construct a building for the plant.

Albany, Ga. — Plans for installing a cooling system in the main mill and box shop of the local Clark Thread Co. plant have been announced. The estimated cost is $75,000.

High Point, N. C.—Bids were to be received April 19 for the construction of a weaving plant for Burlington Mills Corp. Burlington currently operates a throwing plant and a weaving plant in High Point.

New York City—Colonial Mills, Inc., announces consolidated net earnings of $2,292,229 on net sales of $10,693,300 for the three months ended Feb. 29, 1948, after taxes and all other charges, and after giving effect to amortization of post-war construction and machinery costs in the amount of $350,000. This net profit is equal to $2.88 per share on the 794,952 shares of $5 per capital stock outstanding. This compares with a net profit of $1,627,948 after taxes and all other charges on sales of $8,357,716 for the comparable quarter of last year, which was equivalent tot $2.05 per share on the 794,952 shares.

Boston, Mass.—Operations of the Kendall Co. and subsidiaries reached new high levels during 1947 with consolidated net sales aggregating $76,536,382, or 33 per cent above the year before, Henry P. Kendall, president, disclosed recently in his annual report to stockholders. Consolidated net income of the company for the year totaled $7,012,841, after all operating expenses, depreciation, interest and provision of $5,041,045 for federal, state and foreign taxes on income. These earnings, after deducting preferred stock dividend requirements, were equivalent to $17.09 a share on the company's 400,000 shares of common stock outstanding, and compare with a consolidated net income of $3,382,109 or $8.01 a common share, in the fiscal year ended Dec. 28, 1946.

New Orleans, La.—Lane Cotton Mills Co. earned a net profit in 1947 of $751,227 on net sales of $11,070,987, an all-time high, according to the firm's annual report to stockholders April 11. In 1946 net earnings were $1,136,568 on net sales of $9,505,295. The profit was equivalent to $3.30 per share of $10 par value stock, which now is reported to have a book value of $17.42.

Worthville, N. C.—J. W. Valentine Co., Inc., is reported to be negotiating for the purchase of Leward Cotton Mills, Inc. Transfer of ownership from R. S. Dickson & Co. of Charlotte, N. C., is expected to take place before the end of April. The Leward plant is equipped with 265 looms, 9,984 spindles and 54 cards.

Buffalo, N. C.—Dover Mill Co., formerly known as the Buffalo Mills, is expected to begin production of combed yarns the first week in May. Renovation and physical enlargement of the old Buffalo plant, including construction of a new one-story brick wing, was started in December and is currently nearing completion.

New York, N. Y.—Financial statements for 1947 of three large rayon producers were released recently: North American Rayon Corp.—earned a net profit in 1947 of $4,011,791, equivalent to $7.83 per share on the common stock outstanding. This compares with net profit in 1946 of $2,707,540 or $5.20 per common share. The corporation's net sales amounted to $24,549,435, an increase of about 22 per cent over the previous year's volume of $20,111,115. American Bemberg Corp.—earned net profit of $1,729,667, equivalent after preferred dividends to $5.82 per share on the common stock outstanding against net profit of $1,737,239 or $5.72 per share in 1946. The corporation's net sales were $13,228,992 in 1947 compared with $11,951,844 in 1946, an increase of 10.7 per cent. American Enka Corp.—showed a net profit of $6,053,802 after provision of $4,170,000 for taxes and $720,596 for depreciation, amortization and obsolescence. Net sales for 1947 were 22 per cent higher than the figure for 1946. The firm does not disclose its figures on net sales.

Boston, Mass.—Ramie Mills of Florida, Inc., reports a deficit of $118,470 for the year ended Jan. 31, 1948, which compares with a deficit of $72,101 for the previous fiscal year. The mills, which cut operations to a skeleton force in February, were organized three years ago to manufacture textiles out of ramie, a fiber long grown and used in the Orient but never widely developed in this country.

Chattanooga, Tenn.—Fifty-three veteran employees of Standard-Coosa-Thatcher Co. were retired April 1 and all are receiving retirement benefits from the company; the firm adopted a new pension plan Jan. 1, the total cost being met by the company.

Belmont, N. C.—Piedmont Processing Co. is planning construction of a plant addition to house about 10,000 spindles and complementary equipment which will be placed on output of 30s combed yarns, single and ply. The mill currently is operating about 5,000 spindles on combed yarns and also has facilities for bleaching and dyeing.

Kannapolis, N. C.—The annual financial report of Cannon Mills Co. and subsidiaries revealed that, although net sales in 1947 registered a sharp increase over 1946, net income showed a decline. Net sales in 1947 were $158,668,126, compared with $113,954,980 in 1946. After providing $10,429,283 for income taxes, consolidated net income for the year ended Dec. 31, 1947, amounted to $15,098,060. This compares with a net of $19,060,003 the year earlier, when the income tax provision totaled $13,662,449. All officers and directors of the company were re-elected at the annual meeting of stockholders and directors held April 13.

Fork Shoals, S. C. — Riegel Textile Corp., which recently purchased the Virginia Mfg. Co. here with 4,416 spindles, is moving machinery from its Ware Shoals plant which will increase the spindles to 11,000. The plant will manufacture warp yarns for the looms at Ware Shoals. N. H. Jenkins of Ware Shoals has been named superintendent of the plant in Fork Shoals, succeeding J. W. Reynolds, resigned.

Pineville, N. C.—Cone Mills Corp. of Greensboro, N. C., has announced details of an expansion program for its plant here which will include construction of six warehouses and a new weave room with 30,000 square feet of floor space. Officials hope to have the new facilities in operation in less than a year and when completed the new project will double the capacity of the plant and increase the number of persons employed from 275 to 550.

Rock Hill, S. C.—The Celriver acetate rayon plant under construction near here for Celanese Corp. of America will open in July, but full production will not begin until early in 1949, it was announced at the firm's annual meeting in New York City April 14. Demand for Celanese acetate rayon pushed sales and earnings in the first quarter to a higher point than in the like quarter last year, stockholders were told. First quarter sales were approximately $57 million, compared to $44,700,000 in the same period in 1946. No specific earnings figure for the quarter was announced, but it was indicated they amounted to about $7,700,000 or $1.40 a share.

Charlotte, N. C.—Servall Fabrics, Inc., a new $100,000 corporation, has revealed plans to operate a plant here to weave plastic materials for draperies, automobile seat covers and other novelty goods. The new plant will not begin production at full capacity but it is expected to employ about 300 persons by the end of the first year.

New York, N. Y.—M. Lowenstein & Sons, Inc., recently reported 1947 earnings of $13,740,442, before contingency reserves and preferred dividends, against $8,807,440 for 1946. The 1947 figure equals $9.41 a common share and the 1946 figure was equivalent to $6.50 a share.

Jacksonville, Ala.—Consumers Textile & Mfg. Corp. has announced plans for construction of a new plant here to cost $75,000.

Biltmore, N. C.—Biltmore Spinning Co. has completed a $12,000 expansion program which included the installation of two 48-inch woolen cards and two mules, adding more operatives to the company payroll.

Luray, Va.—Luray Textile Corp., operated as a subsidiary of Schwarzenbach Huber Co. of New York since its establishment in 1940, has been merged with that company and is now known as Luray Textile Division of Schwarzenbach Huber Co.

Charlotte, N. C.—Officials of Leading Embroidery Co., North Bergen, N. J., have acquired from the War Assets Administration a 13½-acre tract here, including a warehouse containing 100,000 square feet of floor space, at a cost of $230,000. It is understood that the property will be used to establish a weaving plant in the former government warehouse.

Danville, Va.—Dan River Mills, Inc., last month staged its annual style show with a modeling of new fabrics and men's and women's garments. Women's stylists and others in the trade were guests of the mill for the event.

New York, N. Y.—For the nine-month period ended Feb. 29, 1948, net sales of Duplan Corp. were $25,144,878 as compared with $21,538,404 for a similar period in the previous year. After deducting taxes and other charges, net earnings amounted to $2,344,446, equal to $3.26 per share on 719,447 shares outstanding.

Goldville, S. C.—Joanna Cotton Mills Co. has donated $67,000 and the Joanna Foundation has collected $25,000 of $33,000 needed to construct a modern $100,000 hospital to serve this community. Listed among contributors to the Foundation fund are Daniel Construction Co., J. Alden Simpson and Hugh Black, Greenville, S. C.; Caughlin, Weaver & Co., Memphis, Tenn.; H. S. Parker Co., New York City; the Bahnson Co., Winston-Salem, N. C.; George H. Woolley, Charlotte, N. C.; W. D. Watkins, Greer, S. C.; Western Shade Cloth Co. of Chicago, Ill., and other localities.

Iva, S. C.—Work is expected to start in June on a $1,000,000 expansion program for Jackson Mills. The project will include construction of a new weave room, renovation of the existing weaving department, air conditioning and installation of new looms.

Baltimore, Md.—The annual financial statement of Mt. Vernon-Woodberry Mills, Inc., released last month, shows a net profit for the year ended Dec. 31, 1947, of $4,003,961 as against $1,995,673 in 1946. The company produced 65 million pounds of textiles with a value of 45 million dollars in 1947 against 60 million pounds with a value of 34 million dollars in 1946.

Oxford, N. C.—An opportunity to purchase company homes has been given to employees of Oxford Cotton Mills, a unit of Burlington Mills Corp. Beginning April 1, a number of residences were offered to the employees for a small down payment with the remainder financed through the company over a long period.

Roxboro, N. C.—Construction of a new four-story office building for Roxboro Cotton Mills will be begun as soon as land is cleared. The building also will house a department store and bank.

Anderson, S. C. — Ground has been broken for construction of the Haynsworth Mill, a subsidiary of Ottaray Textiles, with the building expected to be completed by early September. The rayon weaving plant is being built for Anderson Industrial Buildings, which in turn will lease it to Ottaray. Daniel Construction Co. holds the contract and the McPherson Co. is the designing and engineering firm.

Winston-Salem, N. C. — Washington Mills Co. has announced that it has adopted a pension plan which will provide for the retirement of its employees when they reach 65 years of age. The firm, which maintains executive offices in Winston-Salem, operates a spinning and weaving plant at Fries, Va. The plan went into effect the first of the month, according to the announcement. The entire cost of maintaining the plan is to be borne by the company. An employee normally will retire on the first day of the month following his 65th birthday. A retirement committee, composed of company officials, however, may, with the consent of an employee, continue him in employment after he is 65. He will receive no benefits until he resigns and then the same amount as is paid any other employee.

Lumberton, N. C.—Global Mills, Inc., of New York City has purchased the units embraced by the former Jennings Cotton Mills, including Dennis Yarn Mills, Fortune Bleach and Dye Works and Admer Knitting Mills, all recently incorporated under North Carolina laws. W. M. Nicholson of Charlotte, N. C., is president of Global Mills, which will engage in the sale of cotton yarns. Immediate expansion of the spinning plant is planned, with installation of combers and additional spindles. Available space in the present building will be utilized, and employment will be increased.

Neuse, N. C.—Erwin Cotton Mills Co. this month became the owner of Diana Mills, when a federal jurist approved sale of the bankrupt plant for $330,000. It was understood that other considerations would bring the total price paid by Erwin to $350,000. The purchase price will enable creditors to receive full payment, court officials said, but stockholders will lose an estimated $150,000. The plant has been operating under a receivership.

Camden, S. C.—Option to purchase a tract of approximately 800 acres of land on the Wateree River near Camden were exercised April 8 by E. I. du Pont de Nemours & Co., Inc., subject to title clearance. The land, which is in Kershaw County about three miles south of Camden and about 27 miles north of Columbia, may be used for the future expansion of manufacturing facilities of Du Pont's Rayon Department.

Johnston, S. C. — Plans are reported underway for construction of a $250,000 addition to the Johnston plant of Deering,

Burlington Mills
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RECEPTIONIST WITH A BACKGROUND—Visitors to the Burlington Mills Corp. executive offices in Greensboro, N. C., are still greeted as usual by a pretty receptionist. But something new has been added. On the wall behind the reception desk, above, is a new, artistic display of the Burlington name, trademark, and slogan—all superimposed on a map of the United States. This design is a duplication of the one which is now embellishing the company's reception foyer at the New York sales offices in the Empire State Building. Burlington Mills of New York has recently redecorated and occupied the entire fourth floor of the world's tallest building.

Milliken & Co., a new plant which was established in 1947. Plans are also underway for a similar addition to the new woolen plant at McCormick, S. C.

Spindale, N. C.—Spindale Mills, Inc., has announced plans to offer a four-year textile scholarship to a boy graduating this year from either of the high schools of Rutherford County whose parents, guardian or other near relative work for the Spindale Mills. The scholarship will be in the amount of $1,000 per year for four years and can be taken at any textile school.

Hartwell, Ga.—Hartwell Mills is completing installation of J-3 long-draft on all intermediate roving frames at the No. 1 Plant here and at the No. 2 Plant in Toccoa, Ga.

Berryton, Ga.—Berryton Mills has installed a new gyrator in the picker room and new winders also have been installed with an overhead cleaning system over all winders. All H & B intermediate and drawing frames are now on long-draft. Fluorescent lights are being installed throughout the mill, the plant is being painted on the inside and the company houses also will be painted.

Lincolnton, N. C. — Carter Mills, a division of A. B. Carter, Inc., Gastonia, N. C., has completed construction of a 50 by 125-foot brick building to be used as a bleachery. To be known as Carter Bleachery, the new facility will be equipped with the latest machinery. James Bramwell will be in charge.

Taylorsville, N. C.—Irene Mills, Inc., has increased its spindles from 12,008 to 16,104, all on long-draft. The plant recently installed a new air conditioning system.

High Shoals, N. C.—Caro-Lin-Ian Mills, Inc., has installed a complete overhead cleaning system in the spinning room and all spinning in the mill has been changed to long-draft. Fluorescent lights have been installed in the entire mill and work is in progress on a complete air conditioning system for the weave room. Thirty new houses have been erected and 30 more are under construction.

Spartanburg, S. C.—Sixty-six employees of Drayton Mills, a unit of Deering, Milliken & Co., have successfully completed a training course on work simplification, and were awarded certificates at special ceremonies held April 5. Additional courses designed to train members of the Drayton organization for an advanced textile future are being planned. M. B. Self is training director for the firm.

Pittsfield, Mass.—A Berkshire Woolen Co. official announced recently that the company's new woolen plant in the South would be located in either Georgia or Alabama. The exact location was expected to be revealed before the end of April. Establishment of the Southern branch of Berkshire Woolen Co. was voted March 31 at a special meeting of stockholders. The executive committee of the board was authorized to proceed with plans.

Talladega, Ala.—Highland City Mills, Inc., new textile plant manufacturing quality worsted knitting and weaving yarns on the American system, expects to get into full production this month.

Greensboro, N. C.—Cone Mills Corp., in an initial financial statement covering the year ended Dec. 31, 1947, reports consolidated net income of $15,101,208 after charges and provisions of $11,833,232 for income taxes. This compares with a new of $10,277,360 in 1946 after providing $8,504,098 for income taxes. Net sales in 1947 amounted to $113,711,235 as compared with $86,922,000 a year earlier. The firm recently obtained permission to construct a $30,000 addition to Revolution Cotton Mills, a unit of the concern in Greensboro, which will house a machine shop and will include about 8,000 square feet of space.

Monroe, N. C.—Bloom Mills, Inc., New York, has acquired two buildings in the Camp Sutton area from the Army and the buildings currently are being remodeled to house a complete 5,000-spindle spinning mill and a weave mill with a capacity of 200 or more looms. Bloom Mills, Inc., operates plants at Gastonia, N. C., Lancaster, Pa., and Gloversville and Saratoga Springs, N. Y. Kenneth Dobbins, who has been connected with the Gastonia plant, will be manager of the Monroe operations.

Pendleton, S. C.—Plans for a housing project, which will contain 100 six-room brick veneer homes and duplex apartments, have been announced by Deering, Milliken & Co., Inc., which is establishing a new plant in Pendleton.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Clyde Elliott, formerly of Granite Falls, N. C., is now general overseer of carding and spinning at Worth Spinning Mills, Stony Point, N. C. The overseer of carding is E. M. Dunn, formerly of Huntersville, N. C., and the overseer of spinning is James F. Baker, formerly of Granite Falls.

H. W. Black, formerly of Avondale Mills at Sylacauga, Ala., has been appointed overseer of weaving at Walton Cotton Mills Co., Monroe, Ga. He succeeds J. B. Doster, Sr., who held the position for 28 of the 48 years he has been connected with Walton. Mr. Doster now is mill watchman.

S. A. McCosh has resigned as superintendent of Forsyth (Ga.) Cotton Mills.

D. S. Ball of Clayton, N. C., has been promoted to divisional superintendent of the LaFar mill chain, with headquarters at Harden Mfg. Co., Rock Hill, S. C. Now divisional superintendent with headquarters at Tolar, Hart & Holt Mills, Inc., Fayetteville, N. C., is J. T. Byrum, formerly of Clayton.

Woodrow W. Edwards has resigned as overseer of spinning at Willingham Cotton Mills, Macon, Ga.

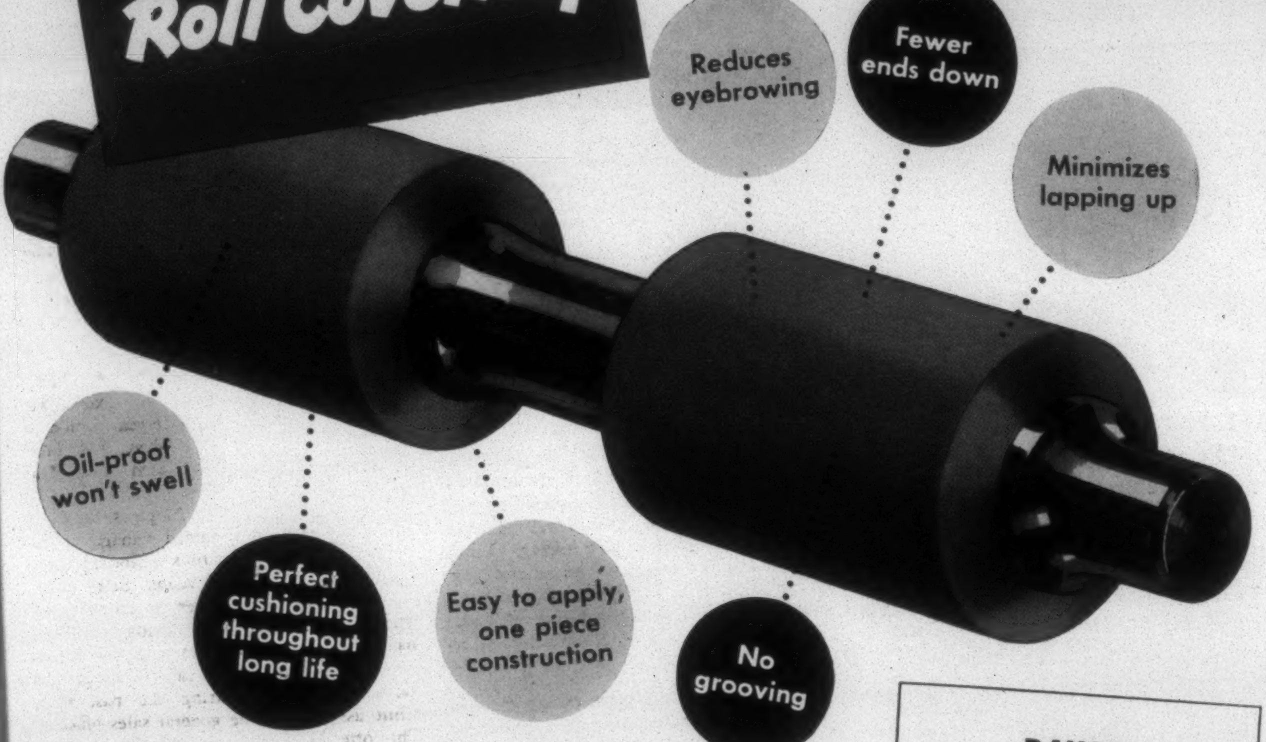
Harry Blanchard is now resident manager for Collins & Aikman Corp. at Norwood, N. C. He succeeds R. V. Blackwood, now connected with Gastonia (N. C.) Combed Yarn Corp. . . . D. M. Burger is now personnel manager for Collins & Aikman at Norwood.

E. Lee Zachary has been named plant superintendent of Asheboro (N. C.) Weaving Mills. He formerly was associated with units of Burlington Mills Corp and until recently was weaving superintendent of Dominion Burlington Limited.

R. S. Stribling has been named plant manager of the new Springs Bleachery of Springs Cotton Mills which is nearing completion at a site near Lancaster, S. C. . . . H. R. Mathewson, formerly general manager of Union Bleachery at Greenville, S. C., has been named assistant to the president, Elliott Springs. . . . Mr. Mathewson was succeeded at Union Bleachery by Percy C. Gregory, Jr., formerly assistant general manager.

J. C. Self, Jr., assistant treasurer of Greenwood (S. C.) Cotton Mill, recently was appointed to the board of directors of the Bank of Greenwood. . . . B. B. Gossett of Charlotte, N. C., for many years a lead-

NEW
Roll Covering



Specially designed for running synthetic and natural fibers, the new red Dayco Type "SE" Roll Covering processes synthetics with greater uniformity, with less lapping up and practically no ends down. Not affected by heat or humidity, The Dayco Type "SE" Roll Covering will give the same uniform service throughout its extremely long life. Remember, whether you're running cotton, wool or synthetics there's a mill-proved Dayco especially engineered for your frames. For complete information write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

DAYCO ROLL COVERINGS
are available for drawing all types of fibers

Whether your frames are equipped with flat or revolving clearers, there is a specially engineered Dayco for maximum results.

TYPE "C" for revolving clearers. Precise, accurate accounting records show the cost per hour of operation is less—with Daycos.

TYPE "S" especially designed for flat clearers, where eyebrowing is a problem. Spinning room overseers, everywhere, acclaim Daycos' ability to draft uniform yarn.

Dayton Rubber

ON YOUR MARK

GET SET

WITH RAYCO!

1. FOR THE MONEY Whether you are a producer or user of Rayco Cotton waste and linters or synthetic waste, you'll find our prices are always fair.

2. FOR THE SHOW Feel free to call on us for full information and quotations at any time.

3. TO GET READY Our fiber experts and four licensed graders are always at your disposal.

4. TO GO There is a Railway Supply plant or Sales and Buying office near you for your convenience. Get in touch with us before you buy or sell!

The RAILWAY SUPPLY & MFG. CO. and Affiliates

Specialists in Grading, Marketing and Processing Cotton and Synthetic Fibers

General Offices: CINCINNATI, OHIO

Plants and Sales Offices:
Cincinnati, Ohio • Franklin, Ohio • Atlanta, Ga. • Charlotte, N. C. • Covington, Tenn. • Greensboro, N. C. • Memphis, Tenn. • New York, N. Y. • Chicago, Ill. • Detroit, Mich. • Dallas, Texas

RAYCO

for COTTON AND SYNTHETIC FIBERS

ing cotton textile manufacturer, has been elected a director of the Liberia Co.

W. E. Henry of Charlotte, N. C., Southeastern district manager of National Electric Products Corp., has been transferred to Detroit, Mich., as Michigan district manager. H. E. Coles, Jr., has been named district manager at Charlotte with a territory consisting of east Tennessee, South Carolina and North Carolina west of Raleigh. D. A. Roach of Richmond has been named manager of the new Virginia district.

George Olsen has been appointed manager of the specialty department of William Whitman Co., Inc., and will make his headquarters at the Wool Fabrics Division, 261 Fifth Avenue, New York City. Mr. Olsen has been connected with the firm for 20 years.

Thomas S. Nichols has been elected president and chief executive officer of Mathieson Chemical Corp., New York, formerly the Mathieson Alkali Works. George W. Dolan, formerly president, was elected chairman of the board, succeedings A. U. Fox, resigned; and John C. Leppart was elected vice-president. Officers re-elected included A. T. Bennett, vice-president and general manager of operations; Howard Berry, vice-president and treasurer; D. W. Drummond, vice-president and general manager of sales; J. V. Joyce, vice-president and comptroller; E. E. Routh, vice-president and director of sales; and A. P. Winsor, secretary.

G. E. Osborne, a veteran of 29 years in the textile industry, has been appointed sales director of Associated Spinners, Inc., New York City. Mr. Osborne will supervise sales and distribution of worsted and specialty yarns for the firm, whose principal mill is at Gastonia, N. C.

Herbert C. Piel, manager of the Indianapolis, Ind., office, and Donald D. Pascal, research director, have been elected vice-presidents of National Starch Products, Inc.

Hanns Bard, who has been general superintendent of Jefferson (Ga.) Mills, Inc., has resigned to accept another textile position.

William M. Fraser has been appointed vice-president of Glass Fibers, Inc., in charge of Eastern textile sales and engineering. In conjunction with Mr. Fraser's appointment, the firm announced that it would establish Eastern offices in the Hospital Trust Bldg., 15 Westminster Street, Providence, R. I., as service headquarters for textile customers in the North and Southeast.

Marshall S. Delavan has been appointed controller of Textron, Inc. He has been connected with the firm for nearly two years.

W. M. Pittendreigh, assistant superintendent of the Reigel Textile Corp. gray mill at Ware Shoals, S. C., has been elected president of the Central Carolina Baseball League.

J. T. Hancock, formerly superintendent of North Georgia Processing Co. at Toccoa, Ga., has been named permanent manager of the Clark Thread Co. finishing plant at Albany, Ga.

Earl Johnston, who has been connected with the Myrtle Plant of Textiles, Inc., Gastonia, N. C., for the past 24 years, has been elevated to the position of assistant superintendent.

O. B. Wilson has been named industrial manager for the Eastern sales region of the Brown Instrument Division of Minneapolis-Honeywell Regulator Co. Mr. Wilson's promotion will make him regional manager of the territory extending from northern Virginia, through eastern Pennsylvania, to the Canadian border, west to Rochester, N. Y., and in New England. He has been with the Honeywell-Brown organization for the past 25 years. He has served as a sales engineer in various parts of the country and has been industrial manager in Houston, Chicago and New York. He will continue to make his headquarters in New York City where he has been the Brown manager for the past two years.

Malcolm A. Peak, left, who except for a three-year period in the Navy has been associated with Old Dominion Box Co. for 27 years, has been named manager of the firm's Standard Line Division. Since 1920, when he started as a shipping clerk at Old Dominion, Mr. Peak has served as production superintendent, purchasing agent, and sales manager of various divisions. During the past year, while assigned to the general sales office at Charlotte, N. C., he has had the responsibility of revising the Standard Line Division, which produces all types of retail and stock boxes.

Directors of Bocon Chemical Corp. have elected John B. Wathey as a member of the board. Mr. Wathey is vice-president in charge of research and development of the company, manufacturer of Boconize, mothproofing compound for the textile industry.

Thomas D. Meriwether, Winston-Salem, N. C., Rotarian and vice-president of the P. H. Hanes Knitting Co., and Mrs. Meriwether will sail from New York City May 3 for Rio de Janeiro, Brazil, to attend the 39th annual convention of Rotary International there May 16-20.

Daniel E. Douty, chairman of the board of United States Testing Co., Inc., Hoboken, N. J., has been nominated for honorary membership by the board of governors of the American Association of Textile Technologists.

At the annual meeting of J. E. Sirrine Co., internationally known engineering firm of Greenville, S. C., A. S. Bedell was elected chairman of the executive committee. Henry L. Hagerman was named vice-chairman. The other members of the committee are George Wrigley, A. D. Asbury and R. R. Adams.

John P. Holmes and Henry C. Van Brederode have been elected vice-presidents of Celanese Corp. of America. Mr. Holmes

Houghton Wool Tops

PROMPT SHIPMENT ALL GRADES ON SHORT NOTICE

SUITABLE FOR BLENDS WITH RAYON OR COTTON

Write or Phone Our
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Industrial, Textile, Electrical and
Plumbing Supplies & Equipment

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RICE DOBBY CHAIN CO.
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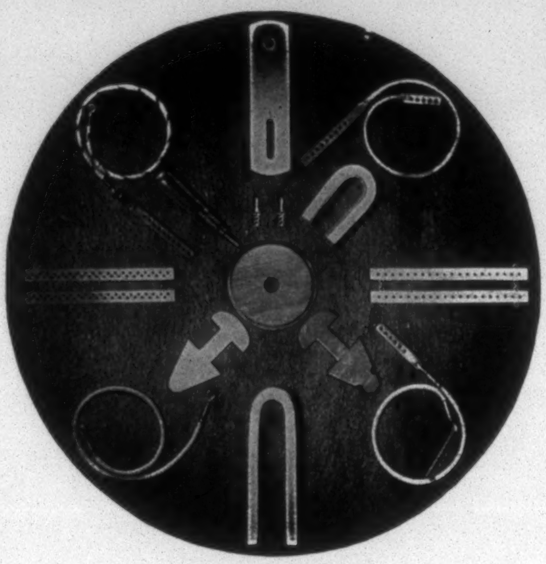

Southern Representatives
John P. Batson, P. O. Box 1055, Greenville, S. C.
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(READY TO SERVE YOU)

CLINTON

STARCHES

For all Textile Purposes

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Offering a Personalized Service to Industry Since 1907

QUALITY • UNIFORMITY • SERVICE

CLINTON
INDUSTRIES, INC.
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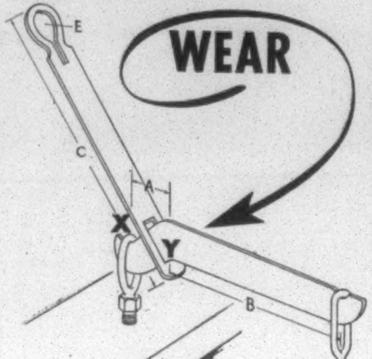
It pays to know the whereabouts of WEAR



WHAT you don't know CAN hurt you! It can be extremely painful. Excessive wear of stirrups and levers in your drafting assemblies, especially when *not* noticed, prevents GOOD SPINNING.

For example, excessive wear at points "X" and "Y" above, often unseen, will destroy proper weighting ratios. Careful inspection of *stirrups, levers* and *lever screws* should be made regularly, and worn parts replaced immediately.

DIXON makes a large line of weighting appliances designed to function perfectly and produced in volume. The savings effected by this volume production are passed along to you. Order your parts from Dixon now and compare for quality and price.

DIXON Manufactures:

➡ 1. More than 350 different stirrups, each with varying lengths—"C"—and special head openings—"E"—to properly fit over and lock on saddles.

➡ 2. More than 275 different levers with varying lengths—"B" and "A"—to allow for any desired leverage.

➡ 3. Over 35 different lever screws with varying diameters, threads per inch and loop lengths.

Quick delivery of spare parts is possible in most cases.

Be sure you know your saddle assemblies are doing their job.

"It Costs so little and saves so much"

DIXON LUBRICATING SADDLE CO.
Established 1876
BRISTOL, RHODE ISLAND, U. S. A.

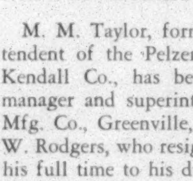
Sole Manufacturers of
DIXON
LUBRICATING SADDLES

and Mr. Brederode are in charge of sales for the knitted fabrics and woven fabrics divisions, respectively, and held similar positions with Celanese Co., Inc., a former subsidiary.

William E. Carson, left, has been appointed manager of the basket division of C. R. Daniels, Inc., Baltimore, Md. Mr. Carson, who has 11 years of experience in the production and sales of industrial baskets, will be in charge of promoting an improved canvas basket design soon to be announced by Daniels.

M. M. Taylor, formerly general superintendent of the Pelzer, S. C., plant of the Kendall Co., has been appointed general manager and superintendent of F. W. Poe Mfg. Co., Greenville, S. C., succeeding W. W. Rodgers, who resigned recently to devote his full time to his duties as general superintendent of the American Spinning Division of Florence Mills. . . . Mr. Taylor was succeeded at Pelzer by W. H. Taylor, formerly manager of the Thrift plant of Kendall at Paw Creek, N. C., who in turn was succeeded by J. C. Ewing of the Kendall plant at Camden, S. C.

Fred Parris has been named president of a new club formed this month by operating executives of the finishing plant at Pacific Mills' Lyman (S. C.) Division. Ben Willis was chosen secretary.



Arthur Booth, left, has been named technical director of the Aridye Dispersions Department in the Interchemical Corp. Textile Colors Division. Mr. Booth joined the firm in 1942, and for the last three years has been in charge of research and development work on Aridye pigment colors and clears. He is the inventor of several products relating to the pigment printing and dyeing of textiles. . . . Interchemical's Textile Colors Division also announces the appointment of S. Y. Stribling, III, as technical representative with headquarters at Rock Hill, S. C. He has been with the first the past three years.

Thomas P. Graham, for many years with the Charlotte, N. C., branch of Crompton & Knowles Loom Works, recently joined the Charlotte Supply Co. as vice-president in charge of sales. Charlotte Supply Co. is said to be the oldest textile mill machinery and equipment distributor in the South.

W. E. Holt, president of Wennonah Cotton Mills Co., Lexington, N. C., was seriously injured recently in an automobile accident near Charlotte, N. C., and was taken to Charlotte Memorial Hospital for treatment.

Raymond J. Barber, Jr., assistant controller of Goodall-Sanford, Inc., Sanford, Me., and James A. Kiely, controller of the Saco-Lowell Shops, Biddeford, Me., have been elected to membership in the Controllers Institute of America. . . . F. T. Noah of the payroll office of Cone Mills Corp., Greensboro, N. C., and Stokes S. Rawlins of Revolution Mills, a Cone unit at Greensboro, have been elected president and treasurer, respectively, of the Greensboro Chapter of the National Office Management Association.

Roger Drackett has been elected president of Drackett Co., Cincinnati, Ohio, chemical firm, to succeed his father, the late Harry R. Drackett.

C. R. Moore, at one time associated with several textile plants in Georgia, recently resigned as overseer of spinning at Strongwall Mills, Cannelton, Ind., to accept a position as sales engineer with Holland Furnace Co., Evansville, Ind.

Dr. Frederic Matthews of Winchester, Mass., has been appointed director of research for the Merrimac Division of Monsanto Chemical Co., Everett, Mass. He succeeds W. S. Wilson, who will devote his full time to special research projects in the paper chemical industry and allied fields.

Kenneth V. McCaleb has been appointed superintendent of the Cornelia, Ga., plant of the Lumite Division of Chicopee Mfg. Corp. He was formerly manager of the United Merchants' jacquard upholstery mill at Elberton, Ga., and previously superintendent of its mill at Paterson, N. J.

A. F. G. Raikes recently was named assistant director of sales in the St. Louis, Mo., general sales office of Bemis Bro. Bag Co.

William T. Wood is the new director of production of the Nylon Division of the Rayon Department of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. Mr. Wood, who has been director of production of the Acetate Division, succeeds W. E. Gladdings, who has been transferred to special assignment for the Nylon Division management. . . . Simultaneously, it was announced that M. G. Jones, manager of the Waynesboro, Va., plant becomes director of production of the Acetate Division, and Thomas Taylor of the Spruance Plant, Richmond, Va., succeeds Mr. Jones at the Waynesboro plant.

A. W. Ricks, formerly of the engineering department of Fieldcrest Mills, Spray, N. C., has become associated with California Cotton Mills Co., Uniontown, Ala., in an executive capacity.

John C. Hipp of the Spartanburg, S. C., office of Lockwood Greene Engineers, Inc., builder of many textile plants in the South, has been named to the board of directors of the firm.

Gerald B. Fletcher, formerly associated with Bibb Mfg. Co., has joined the staff of the A. French Textile School of the Georgia School of Technology, Atlanta, as associate professor in textile engineering.

Horace W. Kiser, for the past three years manager and vice-president of Abbeville (S. C.) Mills Corp., a Deering Milliken unit, resigned from that post recently and was succeeded by R. C. Edwards, plant manager. Mr. Kiser also was manager of Deering plants at Johnston and McCormick, S. C.

Fred B. Wilkinson has been appointed manager of the cotton department of Erwin Mills, Durham, N. C., succeeding the late J. R. Turnage. Mr. Wilkinson, who joined the firm in 1932, will have charge of all the company's buying of cotton, including the mills at Erwin and Cooleemee, N. C.

T. C. Flanagan, formerly manager of American Twine Corp., Statesville, N. C., has been named superintendent of the American Thread Co. plant at Dalton, Ga.

William Triplett, formerly with Burlington Mills Corp., has joined Pomona Mfg. Co., Greensboro, N. C., as chief chemist and superintendent of dyeing and chemical operations. . . . Terrell Wilkinson, formerly with Callaway Mills at LaGrange, Ga., has been named new cost accountant at Pomona and D. J. Moncus, formerly of the maintenance department at Callaway, had been appointed Pomona's master mechanic. . . . Recent promotions at Pomona include: R. W. Kock, from assistant superintendent and production manager to superintendent; W. L. Elkins, from cost accounting to overseer of the carding and spinning departments; and E. V. Allred, from bookkeeper to office and personnel manager. . . . Dave McCollum, designer, will take over production control as an additional duty.

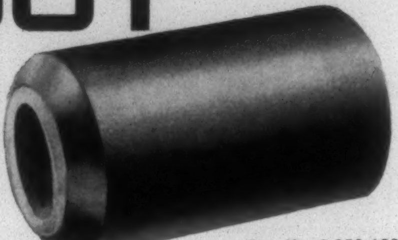
Link-Belt Co. announces that C. C. Wiley, shown at left, heretofore district sales manager at Birmingham, Ala., has been appointed district sales manager at Baltimore, Md., to succeed H. Merrill Bowman. Mr. Bowman has been made assistant divisional sales manager for power transmission, with headquarters in Chicago, Ill. Announcement is also made of the appointment of James Tommie Bell, Jr., right, as district sales manager at Birmingham to succeed Mr. Wiley. . . . Link-Belt announces that it has established a district sales office at 137 East Forsyth Street, Jacksonville, Fla. Robert L. Lowder, formerly district sales engineer at the Link-Belt plant in Atlanta, Ga., has been appointed district sales manager in charge of the new office, from which he will now serve hi scustomers in Florida and southern Georgia.

James D. Fleming, formerly executive vice-president, has been elected president of Grinnell Co., Providence, R. I. He succeeds Russell Grinnell, who was named board chairman.

William D. Anderson, chairman of the board of Bibb Mfg. Co., Macon, Ga., has donated $100,000 to Wesleyan College, Macon, launching a drive for a two million dollar college endowment fund. . . . Carl

"DUSCOT"

A REALLY NEW ROLL COVERING MATERIAL

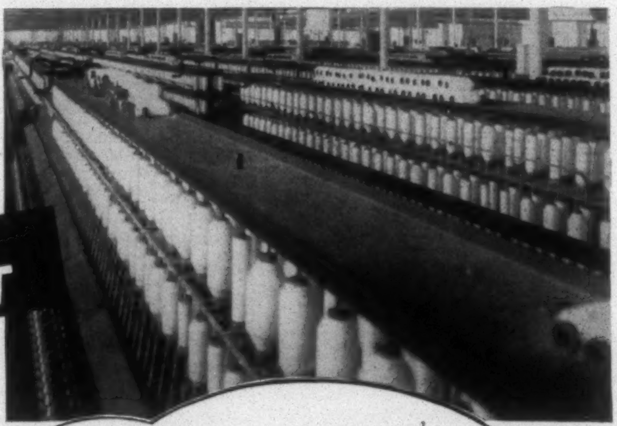


PAT. NO. 2,353,462

DELIVERS THE GOODS

FROM TEST TUBE

"Duscot" is a completely new and improved roll covering scientifically discovered, developed and tested specifically for the textile industry by one of the largest and leading research laboratories.



TO TEST

A leading Southern mill says:

"This is the best cot we have ever used. Our ends down have been reduced to the extent that we need 2 men less per shift in the Spinning Room and 2 employees less per shift in the Spooling operation. This is due to the fact that the yarn does not show so many breaks and fewer ends are required to be tied."

And another mill writes:

"This is the nearest approach to a perfect cot in synthetics that has been developed."

And a recent random survey showed: That 13 additional mills conducting tests were so pleased with these cots that they were extending their use of "Duscot" to drawing frames and card room frames.

TO YOU

"DUSCOT" means MORE PRODUCTION AT LESS COST

W. D. DODENHOFF CO., Inc.

GREENVILLE, S. C.
MAIN OFFICE

MAYWOOD, N. J.
EASTERN DIVISION

KEYS TO SPINNING SUCCESS

The tiny traveler unlocks the way to better spinning by providing just what is necessary at the heart of the spin. You must have the right key, however, and DARY is it.

Dary Ring Travelers are right because they are processed for longer wear around the ring. Hard, smooth and tempered for durability, they make higher spindle speeds possible with every type and count yarn.

Ask your friendly Dary Representative about the *keys to your spinning success* — Dary Ring Travelers. He will be glad to tell you the whole story of Dary Dependability.

DARY PROCESSED
SYMBOL OF SUPERIORITY

The DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
H. REID LOCKMAN, BOX 515, SPARTANBURG, S. C.

Rudisill, president of Carlton Yarn Mills, Inc., Cherryville, N. C., has been elected to serve on the board of trustees of Lenoir-Rhyne College, Hickory, N. C. . . . Gifts from R. Barton Hayes, president and treasurer of Hayes Cotton Mill Co., Lenoir, N. C., have made possible the outfitting and equipping of the Hayes Machine Shop, an extension of the Davidson College physics laboratory at Davidson, N. C. . . . I. Rogosin of New York City has donated $5,000 to be applied toward the expenses of collecting case material for classes at Colgate University, Hamilton, N. Y. Mr. Rogosin is president of Beaunit Mills, Inc., which operates plants at Lowell, Statesville, Rockingham and Kings Mountain, N. C.

Charles W. Carvin, formerly a director and vice-president in charge of sales for Industrial Rayon Corp., has acquired controlling interest in Pondell Fabrics, Inc., a rayon fabric converting firm.

Harald L. Amrhein recently was elected president and treasurer of the American Paper Tube Co. of Woonsocket, R. I., and Greenville, S. C. Edmond H. Guerin, Jr., was re-elected vice-president in charge of manufacturing and Robert J. Guerin was elected vice-president and secretary.

Rudolph Starr has been named to succeed William E. Wyche as general manager and superintendent of Voit Rubber & Textile Co., Inc., Gastonia, N. C. Mr. Wyche resigned recently to become Southern representative of Coleman & Co., New York factoring concern.

W. G. Irby, native of Eufaula, Ala., has been named editor of the *Avondale Sun,* newspaper devoted to interests of employees of the Avondale Mills and Cowikee Mills, Alabama textile concerns. Mr. Irby succeeds Mrs. Frances Rumsey, editor since 1941, who has been granted an extended leave of absence at her own request.

Ivar Moberg, left, formerly with Nashua (N. H.) Mfg. Co., has joined the research and quality control department of Fieldcrest Mills at Spray, N. C. As a development engineer he will devote a great deal of his time to the Fieldcrest thermostatic blanket. Mr. Moberg is well-known in the textile industry as an inventor, technical writer and instructor. He is a native of Sweden, and has been in this country since World War I.

Sam M. Butler, formerly connected with Carlton Yarn Mills, Inc., Cherryville, N. C., has become associated with Glenn Mills, Inc., of Lincolnton, N. C., and has been elected a vice-president of the firm, devoting his time to both manufacturing and sales.

James Breakell, an official of the Roanoke, Va., plant of the American Viscose Co., has been elected president of the Roanoke Executives Club. . . . Wyman L. McDaniel of Dunean Mills, Greenville, S. C., was named "Optimist of the Year," and presented with the John H. Holcombe Trophy by the Greenville Optimist Club. . . . Emmett Warren, vice-president of Avondale Mills, Sylacauga, Ala., recently was elected president of the Sylacauga Rotary Club. . . . J. L. Thompson, Jr., secretary and treasurer of Glenn Mills, Inc., Lincolnton, N. C., has been named president of the Lincolnton Rotary Club. . . . Wallace E. Moore, purchasing agent for Spartan Mills, Spartanburg, S. C., has been named Spartanburg's Young Man of the Year by the Spartanburg Junior Chamber of Commerce.

Jess Snead has been promoted to night overseer of winding at Carter Mills, Lincolnton, N. C. He replaces Bayliss Link, who is now day overseer of winding. Ed McGee has been promoted from night overseer to day overseer of carding.

P. K. Dry, superintendent of Corriher Mills Co. and Linn Mills Co. at Landis, N. C., has announced his candidacy for a place on the Rowan County board of commissioners. Mr. Dry's announcement came shortly after Hearne Swink of China Grove, N. C., a vice-president of Cannon Mills Co., said that he would not seek re-election to the board.

OBITUARY

William J. Bailey, 82, president and treasurer of Clinton Cotton Mills and Lydia Cotton Mills, died April 11 at Clinton, S. C. Besides his textile interests, he was prominent in financial, civic, educational and church affairs. Among survivors are two granddaughters and three sisters.

Palmer Whitney Pollard, 67, superintendent of Pinnacle Mills, died March 30 at Easley, S. C. He is survived by his widow, one daughter, two granddaughters, three brothers and two sisters.

John R. Ross, 68, cotton yarn distributor of Philadelphia, Pa., died April 11. He had been Philadelphia branch manager for Johnston Mfg. Co. and secretary-treasurer of Lowell Yarn Co. before forming his own yarn firm. He is survived by his wife, a daughter and three brothers. Interment was at Charlotte, N. C.

Sidney C. Erlanger, 64, chairman of the board of BVD Corp., underwear manufacturing concern, died March 30 at his home in Elberton, N. J. He is survived by a brother and a sister.

J. R. Turnage, 68, cotton buyer for Erwin Cotton Mills Co. for the past 41 years, died March 21 at Durham, N. C. He is survived by six brothers.

W. E. West, vice-president and director of Southern Silk Mills, Inc., Burlington, N. C., died April 10.

Thomas J. Gibson, 73, retired overseer at Dunson Mills, died recently at LaGrange, Ga.

James C. Moss, 42, for a number of years in charge of the industrial department of the Celanese Corp. of America woven fabrics division, died recently in New York City. He leaves his widow and a sister.

For The Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Mathieson Stockholders Change Name Of Firm

Stockholders of the Mathieson Alkali Works, at the annual meeting March 30 at Saltville, Va., approved a change in the company's name to Mathieson Chemical Corp., authorized the issue of 500,000 additional shares of common stock, approved the retirement of all but the present outstanding shares of preferred stock and elected directors for the fiscal year, according to A. U. Fox, chairman of the board. The change from the original name, adopted when the company was formed in 1892, is for the purpose of identifying the company with its increasingly diversified line of products, Mr. Fox explained. The new name will become effective as soon as registration formalities have been completed. May 1, 1949, has been set as the date by which all certificates of stock, common and preferred, must be exchanged for new certificates of stock of the same class.

Authorized common stock of the corporation was increased from 1,000,000 to 1,500,000 shares. The new stock together with previously unissued and Treasury stock will make available approximately 672,000 common shares which may be used for additional financing. No plans have been formulated for the issue and sale of this stock, Mr. Fox pointed out. Two proposals regarding the preferred stock were approved. These will have the effect of reducing the present number of the non-callable seven per cent cumulative preferred stock from 35,000 shares to 23,777 shares, which is the number now actually outstanding and held by the public.

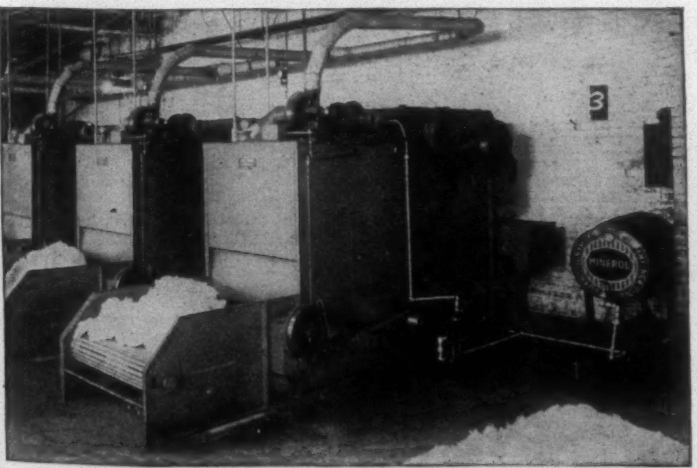
George W. Dolan, Mathieson president, reported to the stockholders on operations. With the expanded plant facilities coming into production approximately as scheduled, he said, and with all output for major products sold on contract for 1948, the record sales of last year should be surpassed. At Saltville, said Mr. Dolan, the expanded facilities for caustic soda are now in operation, and the dry ice plant will add 30 per cent to capacity in May at the beginning of the heavy sales season for that product. Half of the 100 per cent increase in soda ash productive capacity at Lake Charles, La., came into operation during February and the balance is scheduled for completion this fall. Directors elected to serve for the fiscal year were Howard Berry, L. G. Bissell, H. Donald Campbell, Malcolm G. Chace, John P. Chase, Mr. Dolan, Mr. Fox, Sinclair Richardson and Robert G. Stone.

Mount Hope Bulletin Covers Phases Of Cloth Expanding

A new bulletin covering all phases of cloth expanding has just been completed by Mount Hope Machinery Co., 42 Adams Street, Taunton, Mass., manufacturer of cloth handling devices. This bulletin deals with the Mount Hope free-wheeling expander, and explains the various types available, as well as the applications of each. Some of those described are a sealed end expander, for use under wet conditions; a batcher expander, specially designed to eliminate wrinkles in goods that are being batched up; an adjustable expander for adjusting amount of widthwise stretch, and a special shaped expander for tire cord fabric. Also included are complete information on how to use the free-wheeling expander, expected life of an expander, cost of repairs, and a price list. Blueprints of most types are shown.

It is claimed by the manufacturer that this patented equipment has met the need for a device which will produce maximum width

MINEROL FIRST and FOREMOST CONDITIONING AGENT for Textile Fibres.



● **MINEROL** is a prepared agent for conditioning textile fibres..a systematic Process of Spraying Natural and Dyed Raw Stock. ● **MINEROL** helps to separate long fibres from the short. It saves *good fibres* and prevents waste. It makes fibres more supple..more pliable. ● **MINEROL** provides *control* of conditions caused by static electricity. It protects the cards and preserves the wire. ● **MINEROL** prevents Dust and Fly..safeguarding health and insuring better working conditions. ● **MINEROL**..as a conditioner is more urgently in demand thru the increased use of staple Cut Rayon and its varied combinations with cotton, wool and other fibres.

BRETON MINEROL PROCESS PATENTED

BORNE SCRYMSER COMPANY

Originators of the BRETON MINEROL PROCESS for CONDITIONING FIBRE

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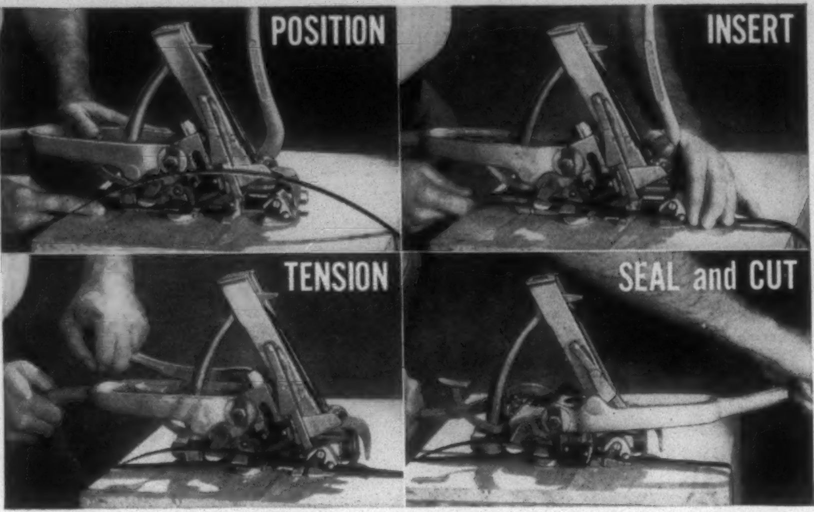
Charlotte, N. C.



4 STEPS . . . 5 SECONDS
with the Improved
STANLEY ACE STRAPPING TOOL

● Puts strapping on a production basis! Even a beginner can make time with it. Magazine holds 75–100 seals — is easily loaded and seals in any position. The "Ace" comes in three sizes to handle ⅜", ½" and ⅝" strapping. Put this production tool to work for you. Write for information or ask for demonstration. The Stanley Works, Steel Strapping Division, 201 Lake St., New Britain, Conn.

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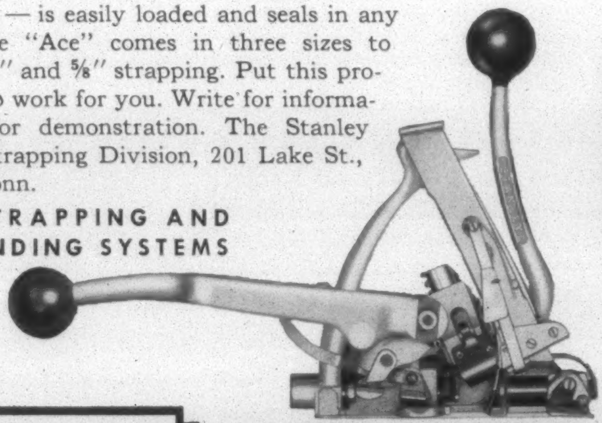
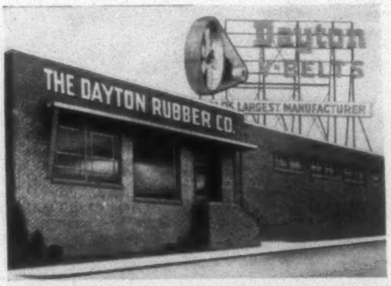


with minimum warp tension (and without undue wear on the surface of the expander) in the finishing or coating of fabrics. It is further claimed that the unit is equally effective on all types of web, cloth, paper, film, etc., which is pulled over it, and has been used successfully on all weights of cloth from rayon marquisette to tire cord fabric. Copies of the Bulletin (ES) are now available on request.

Dayton In Full Production At Atlanta, Ga., Branch

The Dayton Rubber Co. is now in full operation in its new branch and warehouse location, a building with sales and service facilities especially designed and constructed for its needs at 1855-59 Spring Street, N. W., Atlanta, Ga., according to J. M. Hubbard, district sales manager of the company. In addition to Mr. Hubbard, the new location is headquarters for all sales representatives covering the Southeastern states. The Atlanta operation serves several hundred automotive, industrial, fractional H. P., and agricultural jobbers, and some 20,000 dealers in the Southeastern markets. The company warehouses a complete line of industrial V-belts for power driven machinery from fractional to a thousand H. P.; automotive belts for passenger, truck and tractor equipment; agricultural belts for farming implements as well as belts for home and farm use.



The new Dayton Building, which is of brick and steel, is fireproofed throughout in construction and with the latest type of sprinkler system. It contains 10,000 square feet of floor space, providing office and warehouse facilities, a modern heating and ventilating system, rest rooms and showers. Ample drive-in and parking space has been provided for receiving and delivery service. Dayton Rubber Co., in addition to its main plant at Dayton, Ohio, has operated a mod-

What Do You Require In HARNESS STRAPPING

?

Low stretch—Stretch of RUSCO Harness Straps is nearly negligible.
Tensile Strength—Strength of RUSCO Straps is unsurpassed.
Resistance to oil and moisture—RUSCO Straps are Neoprene Impregnated.

It Adds Up to Longer Wear with RUSCO

In addition to these qualities, RUSCO offers a flexible *Interwoven* construction — Definitely eliminating the ply separation which is a common cause of failure in the conventional ply type of Fabric Harness Strapping.

Your own test on a few looms will show how well RUSCO meets your Harness Strap requirements.

Cut and punched to individual specifications or furnished in Roll Form by

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ern factory in Waynesville, N. C., since 1941, to serve the Southeastern area. The company has pioneered many developments in natural and synthetic rubbers. Products with these advanced construction features, some dating back to the early 1930s, are now used broadly in the automotive, industrial, textile, printing and agricultural industries. The company is recognized as the world's largest manufacturer of V-belts.

Keever Starch Co. Notes Fifty Years In Business

The Keever Starch Co. of Columbus, Ohio, home of Victor Mill Starch, is using a booklet titled *The First Fifty Years* and specially-designed gold and black seals to tell customers and other friends of its golden anniversary. The 12-page, four-color booklet presents a brief history of how Keever began operations when "mustache cups graced many a gaslit dining room and Lily Langtry was the toast of the nation." Charles C. Switzer of Greenville, S. C., manager of the firm's Textile Sales Division, is shown inspecting it in the accompanying illustration.

Keever was incorporated in 1898 with a capital stock issue sufficient to start the manufacture of the firm's first products. Today Keever has corn, wheat, rice and combination starches, wheat paste, wheat gluten, and rug size.

Completely new production facilities are being installed as part of a long range improvement program that had been balked during World War II. All machinery and equipment used for wet starch processing has been, or is being, replaced as rapidly as construction conditions permit, according to Mr. Switzer. Keever advertisements in trade publications carry the Keestar Golden Anniversary seal, which is imprinted on company letterheads and placed on all bulletins issued from the home office.

Offer Second Edition Of American Wool Handbook

The second and enlarged edition of the *American Wool Handbook*, widely known and endorsed book on all phases of wool

Stainless Steel

FOR

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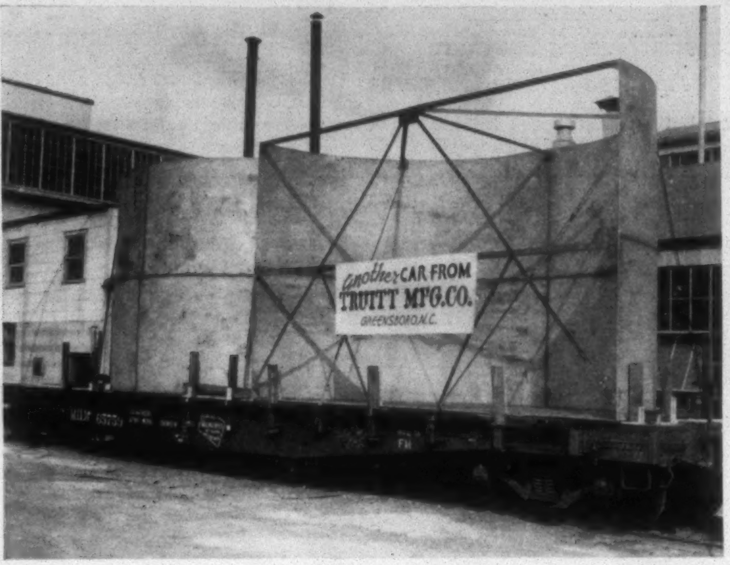

20′ x 20′ Stainless Steel Tank for *Nitric Acid Storage* in Use by TVA.

The experience of the fabricator in choosing the proper stainless steel for your individual purpose *is a vitally necessary and important point* to consider. Properly chosen and fabricated, stainless steel is stronger . . . is non-corrosive . . . needs no painting . . . has longer earning life and lower maintenance costs.

Truitt will fabricate tanks of any size and capacity for *acids, caustics, dyes and special solutions.* Refer your requirements to us . . . our engineering services are available without cost.

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Fabricators of Solid Stainless Steel and Stainless-Clad Tanks • Dyeing Vats • Washing Tanks • Steam Drums • Storage Tanks for Acids and Alkalis • Mechanical Agitators • Separators • Stainless Steel Trucks • And Many Other Stainless Steel Products.

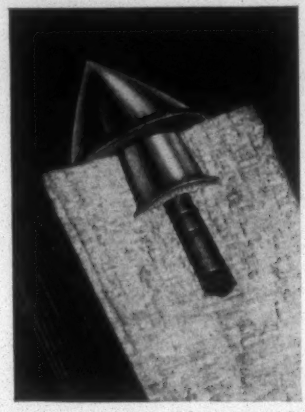
growing, woolen and worsted yarn and cloth manufacture, is announced by Textile Book Publishers, Inc., 303 Fifth Avenue, New York, N. Y. The second edition has been brought up-to-date and certain sections of the text have been completely revised and expanded. It consists of 24 chapters, over 400 pertinent illustrations, photomicrographs, diagrams, tables and blow sheets. It has an enlarged subject index and over 1,000 pages of technical text matter. Price of the book is $8 in the U .S. and Canada and $9 and postage in all other countries.

Gossetts Named Southern Agents For Two Concerns

Ralph Gossett and son, Ralph Gossett, Jr., 111 Augusta Street, Greenville, S. C., recently have been appointed Southern representatives for the Slasher Cloth Division of Beacon Mfg. Co., Swannanoa, N. C., and of the Neveroil Bearing Co., Wakefield, Mass. In addition to these companies they also represent the David Brown Co., Lawrence, Mass.; Akron Belting Co., Akron, Ohio; Gill Leather Co., Salem, Mass.; Atkinson, Haserick & Co., Boston, Mass.; and Georgia Webbing & Tape Co., Columbus, Ga., as Southern representatives.

Watson-Williams Offering Shuttle Tip Improvement

Watson-Williams Mfg. Co., Millbury, Mass., announces an entirely new and exclusive shuttle tip improvement, the Locking Tip Sleeve, now available on all Watson-Williams shuttles for wool, worsted, cotton and silk weaving. For years loose tips have caused costly loom breakdowns, cracked or checked blocks, prematurely worn shuttles, warp breakage and constant threats to the safety of the weaver from shuttles hurtling from the loom. The Locking Tip Sleeve anchors tips in the block forever, the company claims.



The device consists of inner and outer sleeves, both made to close tolerances, so designed that when it is driven into the shuttle block, the wood is compressed between the inner and the outer sleeve, which in turn becomes bell shaped, to anchor the sleeve tightly to the block. The tip, itself, with knurled shank, is then forced into the sleeve, the opening of which is of smaller diameter than the shank. The knurling bites into the inner sleeve to form a maximum bond. Continued pressure on the tip while the shuttle is in service, only serves to embed the sleeve and tip shank more solidly than ever. The above illustration shows a shuttle block split apart to indicate the Locking Tip Sleeve in position.

Performance Data Of Precision Viscometer

The Precision-Interchemical rotational viscometer, offered by Precision Scientific Co., 3737 West Cortland Street, Chicago 47, Ill., is a high-speed, wide range instrument, which measures, in accordance with the principles of modern scientific rheology, the flow properties of paints, printing inks, plastics, adhesives, food products, and similar industrial products. The interchemical viscometer produces consistency curves in place of single point measurements which are usually mis-

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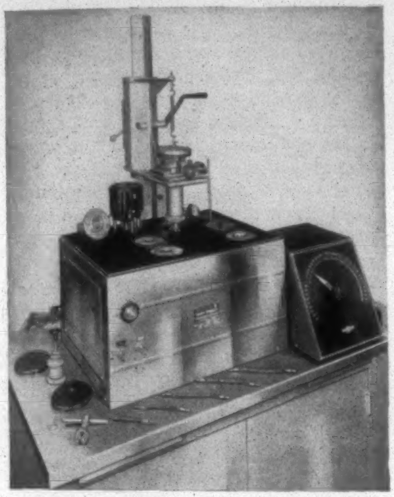
leading for plastic, thixotropic materials. It consists essentially of a rotating cup containing the sample to be measured, and a stationary bob immersed in it. When the cup is rotated at the predetermined speeds, a viscous drag is imposed on a coiled spring supporting the bob, which is twisted through an angle measured on a calibated disk. The speed of rotation of the cup may be varied from ten to 400 r.p.m. in steps of ten r.p.m. by using a General Electric Thy-Mo-Trol drive.



The consistency curve is produced by changing the speeds over a series of steps from low to high and back again, and noting the corresponding deflection of the graduated disk. Forty changes in speed are possible in three minutes. Breakdown of thixotropic materials can be obtained from the hysteresis loop formed by plotting together the up and down-curves. Calculations using either the area of this loop, or two down curves, each at different top speeds, give the magnitude of the breakdown. From the down curves, Newtonian and plastic viscosities in the range of one to 2,500 poises and yield values up to 180,000 dynes/cm.^{2} may be determined. The bob shaft is positioned by ball bearings, which reduce friction, keep the bob in alignment, and prevent the pendulum motion common in bobs suspended from a torsion wire, the company claims. A constant temperature water bath provides temperature control from 20° to 100° C., with a sensitivity of 0.1° C.

Westinghouse Issues Guide To Infrared Applications

Radiant heat processing for the textile and other industries are described in a new booklet, *Modern Baking, Drying, Heating With Industrial Infrared Lamps,* announced by the Westinghouse Electric Corp. Case histories are given to show how infrared cuts costs, speeds production and saves space wherever heat is required for dehydrating, finishing baking or mass heating. A check list of applications for which it is now being used names more than 70 operations and processes in a wide variety of industrial plants.

The 16-page booklet tells why infrared provides more heat per dollar of investment. It discusses the four major types of installations — the portable or non-oven type, the single-walled oven, the double-

A WEAK OR STRONG LINK IN YOUR CHAIN OF COMMAND?

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NO STRONGER than any of its links, your chain of command in profitable production depends on many small things.

Thus the always dependable, super-precision quality of Pioneer Heddles and Reeds is a gratifying assurance of peak output with a minimum of loom stoppage.

Our mill-experienced representatives will be glad to work with your organization in assisting to keep your efficiency at a maximum.

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walled oven, and the insulated oven. Application data to aid in planning installations is included. Copies of the booklet (A-3817) may be secured from Advertising and Sales, Westinghouse Lamp Division, Bloomfield, N. J.

SKF Makes Charlotte District Headquarters

In a move to facilitate service to Southern industries, whose post-war expansion has resulted in greater demands for anti-friction bearings, SKF Industries, Inc., has announced that after April 1 its branch office at Charlotte, N. C., would become a district headquarters with a territory embracing two states and parts of three others. R. R. Zisette, general sales manager, said the Charlotte district, formerly a branch of the Atlanta district, will include all of North and South Carolina, 74 counties in southern Virginia, 30 counties in eastern Tennessee, and two in northern Georgia. The Philadelphia ball and roller bearing firm now has 15 district and four branch offices in the United States.

Three New Firms Are Serving Textile Industry

Three new firms serving the textile industry have been established in recent weeks: The Chemical Service Laboratory has been established at 1429 Bryant Street, Charlotte, N. C., and will operate a microscopical, analytical and consulting service for the textile industry. L. H. Elizer, director of the firm, was with the Charlotte laboratory of Stein, Hall & Co. for ten years and is well known in textile chemical circles. The Chemical Service Laboratory is now working at full capacity, according to Mr. Elizer, but expansion of facilities now under way will make it possible for the organization to serve a selected number of new clients after June 1.

Yarn Preparation Machinery Co., with an authorized capital stock of $5,000, was chartered by the state of South Carolina April 5 and will serve the industry from Gaffney, S. C. Lewis E. Blackshear is president of Yarn Preparation Machinery Co.

Curran S. Easley, formerly with Louden Machinery Co., and Hugh Black, representative of Graton & Knight and Dodge Mfg. Corp., have formed a business association, specializing in materials handling and power transmission equipment. Offices and stock rooms will be at 29 Pendleton Street, Greenville, S. C. Other firms represented are: Alvey Conveyor Mfg. Co., Harnischfeger Corp., and Crescent Truck Co.

Monsanto Is Producing New Vinyl Resin Coating

Production of a new economical vinyl resin coating combining flame-resisting qualities with exceptional abrasion and weathering characteristics was announced recently by Monsanto Chemical Co. The announcement of the new product, named Ultrasol, was made by Josiah B. Rutter, Monsanto vice-president and general manager of the company's Merrimac Division. The division, with headquarters in Everett, Mass., is widely known for developments in the industrial surface coating field during the past 30 years.

Ultrasol-coated fabrics are similar in appearance to the more common nitrocellulose-treated products. Applied to paper or fabric, it gives either a smooth, colorful finish or a decorative leather-like effect. It is equally effective in bright colors or pastel shades,

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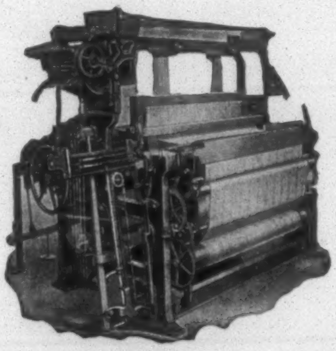

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All Purpose Textile Cleaner and degreaser. Non-inflammable, Non-toxic, will not injure the skin. Replaces Varsol, Kerosene, and other hazardous solvents. **Will Remove oil spots from any fabric which water will not harm.**

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ADHESIVES

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SULLIVAN & COMPANY

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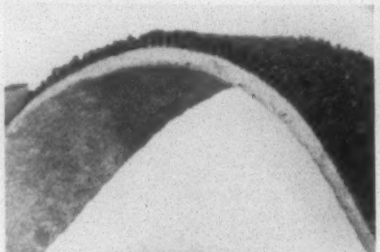
Monsanto claims. The superior properties of vinyl resins have been recognized for years, but the application from low solid content solutions was too expensive for general usage. The introduction of the Ultrasol-type coating now allows vinyls to compete with the most economical coating materials.

Monsanto's tests have proved the new product's capacity for withstanding abrasion, hard use and moisture. Ultrasol offers distinct advantages as a surface coating for restaurants and cocktail lounges, plus upholstered walls and modern decorative effects. Highly resistant to alcohol, acids, alkalies, vegetables and body oils, Ultrasoled materials are washed easily with ordinary soap and water. An important factor in selection of upholstery for busses, trucks and convertibles, the ability of fabric to remain flexible at temperatures below 20° F. was one of the determining criteria in tests on Ultrasol. The Ultrasoled material demonstrated its adaptability to this condition by withstanding even sub-zero temperatures without cracking or crazing.

An outstanding contribution to the surface coating field by the new product lies in its resistance to fire. Ultrasol, according to the Monsanto tests, will not support flame. Applied to untreated fabrics, Ultrasol retards burning considerably. Used in conjunction with properly treated fabrics, Ultrasol coverings can be made practically fireproof. Ultrasol's applications are not limited to industrial uses. Ultrasol coverings add in definite measure to beauty, protection and economy in the home.

New Sponge Rubber Is Adaptable To Many Uses

A new non-inflammable, low-cost sponge rubber with important application possibilities has been developed by The Commonwealth Engineering Co.'s laboratories at Dayton, Ohio. Produced from materials which are in free supply, the new sponge rubber can be delivered through a hose, where it sponges at the nozzle; cast in sheets and in open molds; or continuously produced at high speed in sheet form in much the same manner as paper is manufactured, it is claimed.



The new compound's flameproof characteristics remedy one of the important defects of conventional sponge rubber, and open many new fields of use. Called Spon, the new product can be applied and vulcanized directly to upholstery materials and the backs of rugs and carpets to provide resiliency as well as flame resistance. Vulcanized to fibreboard and boxboard, the new material constitutes an economical protective

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SIZING problems, many weavers know by long experience, are most readily solved with a call to the Frank G. North organization of men who are at home in the mills.

For almost half a century our products and our staff of experienced mill-trained representatives have contributed to profitable, efficient textile production.

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lining for cartons used in the shipment of glass products, instruments, etc.

Spon is also adaptable to construction use, being made in a simple, on-the-job apparatus which delivers the material for insulation, soundproofing, or cushioning. Substantially odorless, Spon is very tough, highly resilient and soft to the touch, and gives a deep cushioning effect even in thin sections. It can be produced in a wide variety of colors and thicknesses, in a hard or soft sponge, company officials state. Plans are being completed by Commonwealth Engineering, an applied industrial research organization, for licensing the new development widely.

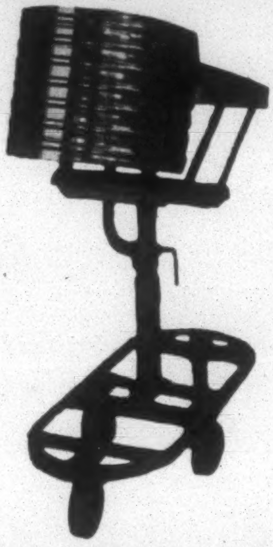
Bristol Opens Series Of Instrument Courses

The Bristol Co., Waterbury, Conn., manufacturer of automatic controlling, recording and indicating instruments for industrial applications, is conducting a series of courses for plant instrument and operating men in the theory and application of industrial instruments. Each course consists of two weeks of intensive lectures and laboratory work, with special emphasis on instrument maintenance and repair. Subjects covered include instruments for pressure, temperature, relative humidity, flow, pH and electrical measurements; pyrometry; pneumatic, electric and electronic control systems, and telemetering. These courses are open to men interested in the application, servicing, and repair of instruments in all types of manufacturing plants, and are under the direction of F. A. Faust, Education Department, The Bristol Co., Waterbury 91, Conn.

Cyanamid Co. Enters New Field With Permel Resin

The American Cyanamid Co.'s Textile Resin Department has announced its entrance into the durable water-repellent field with the introduction of its Permel Resin finish for cotton, wool, corduroy, and synthetic fabrics. Among other advantages, Cyanamid's new repellent is free from troublesome or unpleasant odor during the finishing operations, it is claimed. It is described as a durable water-repellent compounded to give maximum repellency, both initially and after standard launderings and dry cleanings. The finish has been tested and approved as a durable water repellent by the U. S. Army Quartermaster.

The Permel finish can be combined with other resins to obtain multi-finishes in one bath, the company states. It was pointed out that a durable spot resistance and crease resistance is economically obtained on rayons when Permel is used with the creaseproofing resins in a single bath. Permel Resin, by itself, will impart some shrinkage control to cellulose fabrics. The shrinkage control can be magnified by adding the thermosetting resins Aerotex Cream 450 or Aerotex Resin M-3 to the impregnating bath. In treating cotton, where shrinkage control is usually important, water-repellency plus shrinkage control can be obtained by a proper formu-



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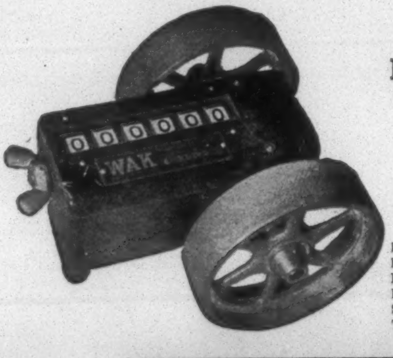

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Tenter Counters
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Folding Machine Counters
Special Counters

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WAK INDUSTRIES
CHARLOTTE, N. C.

*T. M. Reg.
U. S. Pat. Off.

lation of resins in the same bath. No special equipment is needed to process fabrics for water-repellency or for the multi-finishes since the normal mill impregnating equipment of padders, driers and cure boxes is used.

Dynamic absorption, according to the Quartermaster Corps tests, which runs as high as 100 per cent on untreated fabrics, will be below 30 per cent, either initially or after three launderings, or after three dry cleanings. The hand will not be materially different from the untreated cloth and there is only a minimum effect upon dyestuffs except on those susceptible to formaldehyde. The curing of Permel Resin is readily accomplished either in the same chamber as the main drying or in a separate chamber. Temperatures in excess of 275° F. must be used for curing.

New Type Of Starch Is Developed By National

A new type of starch, Clear Flo, swelling at considerably lower temperatures than ordinary starches, and which gives clear, stable, and unusually viscous pastes has just been announced by Dr. C. G. Caldwell, coordinator of research for National Starch Products, Inc. Available in both high and low viscosity grades, Clear Flo starches are easily prepared by merely adding hot water to a suspension of the starch in cold water. The pastes obtained range from opaque to very clear depending upon the temperature of the water used. The unusually high water-taking ability of Clear Flo starches permits considerable dilution with but slight loss of the body, the company states.

According to Dr. Caldwell, the unusual clarity, stability, high viscosity and ease of preparation of the Clear Flo starches suggests their application for a wide range of industrial uses, such as a desensitizing gum in lithography, as a paper sizing ingredient and as a translucent, smooth, non-congealing thickener for cosmetic creams and lotions. Finishes with excellent stiffness, uniformity and feel are obtained when using the Clear Flo starches for laundry starching. Other possible uses suggested for the Clear Flo starches as thickening, binding, or dispersing agents are in textile finishing and sizing, in cleaning compounds, water colors and paints, wall paper and poster pastes, in the dispersion of pigments for wet grinding, and in boiler feed water to prevent scale formation.

The similarity of many of the properties of the Clear Flo starches to those of carboxymethyl cellulose suggests many other uses. National has applied for patent protection covering the new line of Clear Flo products, which have been developed over a period of several years. Research samples of the Clear Flo starches can be obtained from National at 270 Madison Avenue, New York 16, N. Y.

Offer Revised Edition Of "The Heritage Of Cotton"

The dramatic, historic and authoritative story of cotton, *The Heritage of Cotton,* by M. D. C. Crawford, first published in 1924, has been revised and brought up to date by the author, and recently republished by the Fairchild Publishing Co., 7 East 12th Street,

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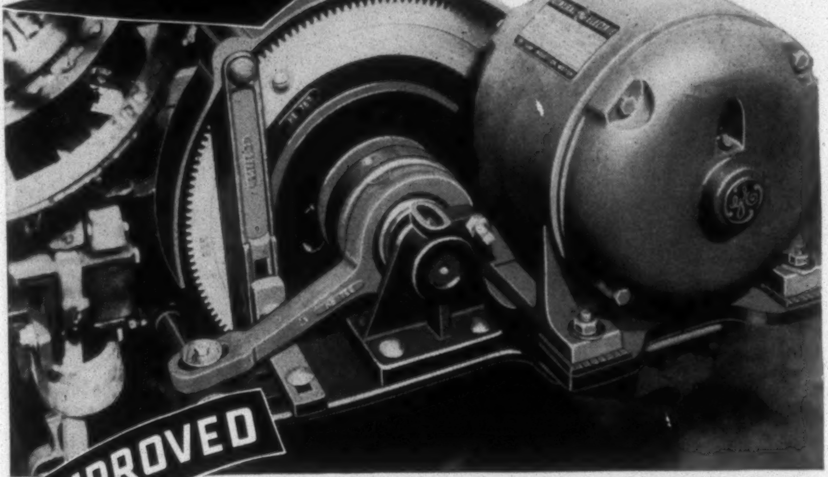

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Direct attachment to loom side integrates motor with loom; eliminates crankshaft strain. Ball thrust bearings save power, reduce friction, keeps gears and crank arms in alignment.

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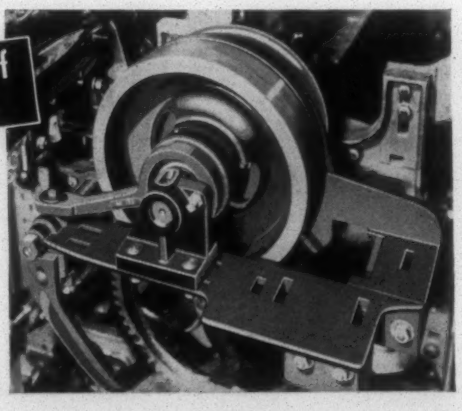

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Particularly efficient when installed with patented Hunt Spreaders on older model looms. Starts from any position. Replaces "tight-and-loose" pulley drives. Flywheel interchangeable with Hunt Individual Motor Drive.

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New York 3, N. Y. Ever since its initial publication almost a generation ago, *The Heritage of Cotton* has been accepted as a standard authority on the history of cotton and its position in the artistic, economic and social, technological and commercial life of the last 30 centuries. It is not merely a handbook of information—it is a vivid account of "a product of human institutions" and its effect on the history of man.

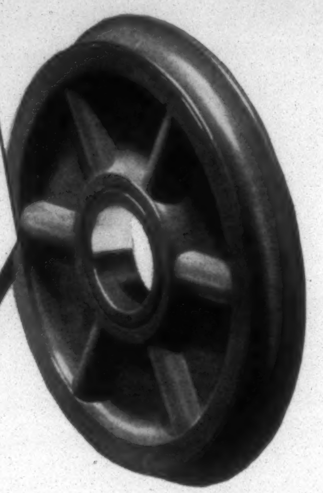
Mr. Crawford has kept his narrative as free from technicalities and statistics as the subject will permit. As he states in his introduction: "It is my hope to present the story of the cotton fiber as a human drama—a drama that is by no means in its last act, but merely passing through one of its scenes." In presenting the most complete story of cotton known to man, the author outlines the evolution of the fiber out of the culture of primitive people as far back as 800 B. C. and then traces its subsequent development through its machine age in England and North and South America to its cultivation and milling in the United States. Because of the many important changes that have occurred in the last quarter of a century, both in the world map of cotton plantations and in the great industrial centers where the cotton fiber is converted into yarn and cloth, Mr. Crawford has brought his original work up to date by the addition of a 50-page chapter, entitled "In Retrospect." This chapter outlines, in detail, the nature of the more important changes which have taken place during this period.

The Heritage of Cotton is invaluable as a basic source of information to any member of the cotton trade. However, because of the human and absorbing manner in which the subject is treated, it is of equal value to those who may not be commercially involved in the industry but who have an interest in the role played by cotton in the civilizations of the world. The book is 5½ inches by 8½ inches in size, richly illustrated, and contains 352 pages. It is priced at $3 per copy.

New Long-Draft Saddle And Cap Bar Announced

The Dixon Lubricating Saddle Co., Bristol, R. I., has announced the production of an entirely new saddle and cap bar for long-draft spinning. Featuring replaceable Slixonice bearings, the new saddle and cap bar offer many unique advantages to improve yarn quality and reduce spinning costs. Used together, the new Dixon saddle and cap bar provide an oil-free drafting unit that eliminates oiling and roll scoring, reduces lint accumulation and roll picking, and lowers the average power consumption. This adds up to less cost and more quality.

Slixonice is a new material which Dixon uses to provide frictionless bearing surfaces that never need lubrication. The use of these replaceable Slixonice bearings in a smooth and clean, new saddle that permits a wide range of roll spacing, is the first radical improvement in saddle design in many



Harness Straps lead an easy life on RunRites

Probably one of the most valued advantages of RunRite Plastic Sheaves is their ability to lengthen the service life of costly harness straps. The surface of RunRites is hard and smooth . . . no abrasiveness whatsoever. Special precision bearings keep them running true. No dusting. Once RunRites are installed they need no further attention.

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years, it is claimed. The bearings, in both saddle and cap bar, are quickly and easily removed and replaced if worn. There is no longer any need to buy a whole new saddle or cap bar. In the cap bars the Slixonice bearing is the cap bar neb. Each neb provides four wearing surfaces instead of the usual one; when these are exhausted replacement is easy and inexpensive. The cap bars themselves are precision finished to allow accurate roll spacing adjustment.

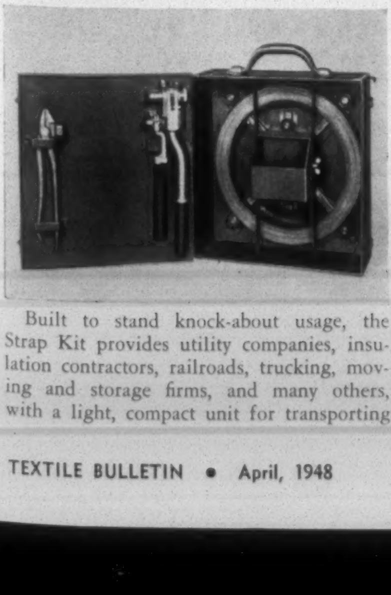
The new Slixonice saddle is available in several models, for use in weighting three rolls in most long-draft spinning. Another model drafts staples up to three inches and can be used for an unweighted middle roll. It will accommodate from $2\frac{5}{16}$ inches to $4\frac{5}{16}$ inches between front and back rolls due to the adjustable feature which also allows the back saddle to automatically maintain its same bearing surface in all positions. Dixon invites inquiries about the new saddle and cap bar. Interested mill men may send for the Slixonice saddle booklet which describes the new drafting unit in more detail.

Miskella Infra-Red Units Described In Bulletins

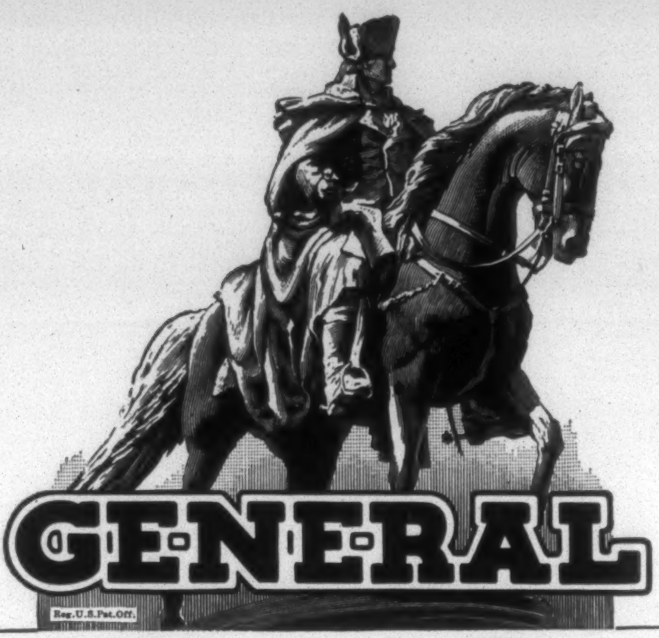
Miskella Infra-Red Co., East 73rd and Grand Avenue, Cleveland, Ohio, recently has issued two bulletins outlining the advantages of Miskella insulated infra-red units for textile applications. Performance data concerning the Miskella Super-Heat oven and the Miskella-Peterson elliptical oven are included in detail in the bulletins.

Portable Light-Weight Kit Carries Strapping Tools

Complete steelbinder strapping equipment packed in a light-weight steel kit called the Strap Kit is announced by A. J. Gerrard & Co. Carried like a small brief case, the Strap Kit contains a steelbinder strapping tool, and cutter, and can carry enough coiled strapping and seals to handle several jobs without a refill, the company states. First unit of its kind, the Strap Kit provides a practical and economical means of carrying strapping equipment to out-of-way points of use. It eliminates wasteful estimates on the amount of strapping needed for such work by dispensing at the point of use exactly the length of strap required. The strapping is unreeled through a small slit in one end of the steel case, a feature particularly attractive to outdoor workers such as power company linemen.



Built to stand knock-about usage, the Strap Kit provides utility companies, insulation contractors, railroads, trucking, moving and storage firms, and many others, with a light, compact unit for transporting



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and dispensing strapping of steel and other metals. Where special climatic or chemical conditions must be considered, the strapping and seals can be supplied in such varied metals as galvanized, monel, stainless steel, copperclad, and aluminum. Fourteen inches high, 12 inches wide and five inches thick, the Strap Kit is finished in stippled battleship gray and fitted with a handle. Full information may be obtained by writing to A. J. Gerrard & Co., 221 North LaSalle Street, Chicago 1, Ill.

Remington Rand Booklet Themes Inventory Control

How to Get Profits from Inventories is both the title and the content of a new 24-page illustrated booklet published by the Systems Division of Remington Rand, Inc. The booklet quickly gets to the heart of this timely question of profitable inventory control. It pictures and describes the most modern methods of simplifying the management of stocks to prevent losses either from too much or too little. It shows why and how improved, modern inventory records reduce clerical costs and conserve executive time.

This booklet explains such important things as: how to balance supplies of each item against demand for it; how to determine most profitable turnover rates for individual items; how to avoid unseen inventory losses that follow averaging of turnover rates; how to determine trends and anticipate changes in demand for stock items; how to avoid needless clerical and record work in controlling stock; how to eliminate needless forms and simplify the requisitioning of needed items without writing individual purchase requisitions; how to save errors by eliminating calculations through the Chart-That-Thinks; and how to cut the costs of buying, owning, warehousing, and disbursing stocks.

These days when break-even points are at all time highs, savings in costs and eliminations of needless wastes are vitally necessary. One important avenue to lower break-even points is through release of capital by obtaining the most profitable turnover rate for each item. *How to Get Profits from Inventories* points the way to cut down and keep down loss-producing overstocks and how to avoid profit-killing and goodwill-losing understocks and out-of-stocks. Copies may be obtained from any R. R. office.

Offer New Bulletins On Textile Resins

Two new bulletins on textile resins have been announced by American Cyanamid Co.'s Textile Resin Department. Based on the experience gained through the rapid increase in the use of resins for finishing that has occurred in recent years, the bulletins contain information on best ways of handling and caring for resins in the mill and finishing plant.

Textile Finishing Bulletin 118, "The Procedure Governing Care of Resins," suggests desirable procedure to be followed to

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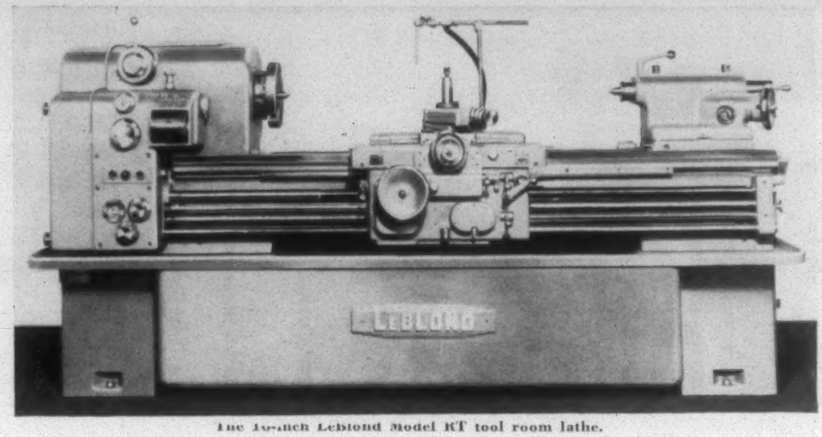
prevent spoilage of resins during storage in the plant. Textile Finishing Bulletin 119 discusses health safeguards in the finishing plant. The bulletins are available upon application to the Textile Resin Department, American Cyanamid Co., Bound Brook, N. J.

LeBlond Tool Room Lathe Offers Many New Features

An unusually wide range of spindle speeds and increased ease of operation are the outstanding features of the new 16-inch LeBlond Model RT tool room lathe announced at the Machine Tool Show by the R. K. LeBlond Machine Tool Co., Cincinnati 8, Ohio. Over 300 speeds ranging from six to 1,500 r.p.m. are controlled by an ingenious speed adjuster unit. More than 100 speeds may be obtained in each of three ranges without stopping the spindle, resulting in faster operation and reduced operator fatigue, according to LeBlond officials.



The 16-inch LeBlond Model RT tool room lathe.

Other engineering advances which add to ease of operation are: universal power rapid traverse which moves carriage, cross slide, and tailstock; the totally enclosed universal quick change box is fitted with a revolving index plate on feed box which contains simple instructions for obtaining five different types of 60 threads and leads each; automatic lubrication headstock, feed box, and apron requires little maintenance attention. Additional new lathe features built into the LeBlond Model RT include: combination gear-belt drive headstock which provides spindle speeds in three ranges; one-piece apron with positive jaw feed clutch and automatic lubrication; the thrustlock tailstock with worm and rack construction which provides full length bearing support for spindle barrel; L-shape bed which supports entire headstock base and which is fitted with replaceable flame hardened and ground steel bed ways front and rear; and many others.

The variable speed drive with which this lathe is powered consists essentially of four elements: speed control units, 7½ horsepower adjustable speed main drive motor, speed adjuster unit with rheostat, and motor generator. This drive replaces brakes and clutches; provides plenty of torque with controlled acceleration for all starting conditions, and stops quickly through dynamic braking. Motor may be stopped and started without interfering with the speed setting, the company claims. The three-purpose speed adjuster unit, located within easy reach of operator's normal working position, consists of shifter for shifting to any one of three drives, speed selector dial for varying the speed of the main drive motor, and a button for jogging the main drive motor.

Three Booklets Offered By U. S. Testing Co.

United States Testing Co., Inc., Hoboken, N. J., has recently had published and distributed to the industry three informative pamphlets: "Core Testing for Determination of Wool Yield and Shrinkage," "Testing Terms for Better Understanding," and "Your Guide to Wise Buying."

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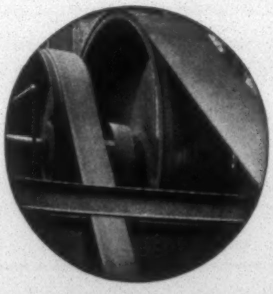
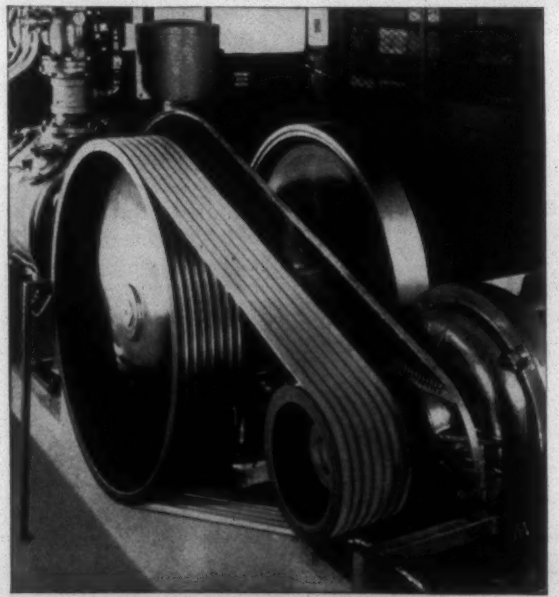


Transmission Belts



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Industrial Recreation Association Meets

The fourth annual meeting of the Southeastern Industrial Recreation Association, with many textile representatives among the 150 delegates attending, was held in Greenville, S. C., recently. Purpose of the conference was to discuss problems confronting recreational leaders and to gain a wider knowledge of the ideas and programs to aid in solving everyday situations. Among speakers heard during the event were Clarence H. Thomas, service manager at Dunean Mills, Greenville, conference secretary; Gary Bodie, recreational director for Woodside Cotton Mills Co., Greenville; Bill Bailey, recreational director for Piedmont (S. C.) Mfg. Co. and Johnny Wahonick, athletic director at the Lyman, S. C., plant of Pacific Mills.

Rayon Manufacturers Confer With Q. M.

A conference was held April 7 between leading representatives of the rayon yarn and rayon weaving and finishing industries, members of the procurement division of the New York Quartermaster Purchasing Office, 111 East 16th Street, New York City, and other representatives of the Quartermaster Corps. The meeting was called in an effort to expedite the production and delivery of rayon linings to be procured under the recently issued invitation to bid covering 3,650,000 linear yards of rayon linings.

The meeting was well attended, representatives being present from rayon yarn producers, rayon weavers and converters, as well as representatives of trade associations concerned. Topics discussed included, among others, the matter of shade tolerance and some details of plant inspection.

Sample Display Rooms Opened In Atlanta

Col. Clyde Massey, officer in charge of the Atlanta Quartermaster Industrial Mobilization District Office, announces the opening of the new down-town location of the offices and sample display rooms of the Atlanta Quartermaster Industrial Mobilization District at 441 West Peachtree Street, N. E., Suite 323, Atlanta, Ga.

The Atlanta District comprises the following 11 Southern states: Alabama, Florida, Georgia, North Carolina, South Carolina, Louisiana, Texas, Mississippi, Arkansas, Tennessee and Oklahoma. This office was established to develop, in consultation with management, the production potential of manufacturing facilities within the district capable of producing Quartermaster items of equipment in an emergency. The sample display rooms will feature the latest types of equipment including textiles, clothing, and mechanical items as well as certain experimental items currently being tested and developed by the Quartermaster research and development boards. Sample rooms were opened to visitors beginning April 1. Representatives of manufacturers are invited to visit the new office location and inspect the sample display.

Judges Are Named For Textile Show

Dr. George E. Linton, dean of the Textile Department at the Fashion Institute of Technology, New York City, and Miss Gladys G. Miller, teacher, author, lecturer and home furnishings stylist, also of New York, have been appointed members of the jury of selection and of awards for the 1948 International Textile Exhibition at Woman's College of the

University of North Carolina, Greensboro. Miss Noma Hardin, chairman of the exhibition and assistant professor of art at Woman's College, is the permanent third member of the jury.

Miss Hardin also announces that the exhibition will open Nov. 1 and will continue open throughout that month. Entries will include woven rugs, woven clothing fabrics, woven draperies and upholstery, napery (woven or printed), printed textiles, woven synthetics, and woven linen. Purchase awards totaling nearly $2,000 will be made in connection with the exhibition. Textiles purchased will become a part of the permanent collection of the Woman's College Art Department.

One of the outstanding shows of its kind, the exhibition each year has presented a comprehensive representation of the best accomplishments in the field of textile design. It has also served to stimulate in college students and other designers an awareness of the potentialities in the field of textiles. Last year's exhibition contained more than 200 entries from this country and Latin America.

Industrial Editors Hold First Meeting

Approximately 75 members of the Carolina Industrial Editors Council, with representatives of employee publications of the cotton textile industry predominating, met April 12 in Charlotte, N. C., for the first regular meeting of the group since its organization last August in Durham, N. C. Presiding over most of the group meetings during the day was Henry W. Calvert, publications director for Erwin Cotton Mills Co., Durham, who is president of the newly-formed group. F. Sadler Love, secretary of the American Cotton Manufacturers Association, with offices in Charlotte, was one of the speakers heard during the meeting.

Council officials announced that the next meeting of the group, to be held within the next six mnoths, would be held either at Chapel Hill, N. C., or Spartanburg, S. C.

Standing committee members of the group include: Vernon Foster, Beaumont Mfg. Co., Spartanburg, S. C., chairman of the publicity committee; Otis Marlowe, Fieldcrest Mills, Spray, N. C., member of the convention committee; and Miss Margaret Sharp of the Pelzer, S. C., plant of the Kendall Co. and Joe Boyd of Melrose Hosiery Mills, High Point, N. C., members of the council's educational committee.

Three Cotton Groups Announce Meetings

The eleventh annual meeting of the National Cotton Council will be held in Los Angeles, Calif., Nov. 30, Dec. 1, Harold A. Young, North Little Rock, Ark., council president, announced recently. The Los Angeles convention will be the second general session of the Cotton Council in 1948. The tenth meeting took place in Atlanta, Ga., last January, when Secretary of State George Marshall addressd the cotton leaders.

Mr. Young said that the conference on the Pacific Coast would mark the first time the cotton organization has ever convened in the cotton-producing area of the far west. He said that in the future the council probably will hold its annual sessions in the late fall rather than during the winter season. "We are expecting that attendance at the Los Angeles meeting will exceed that at any previous convention," the council president said. "Indications are that more than

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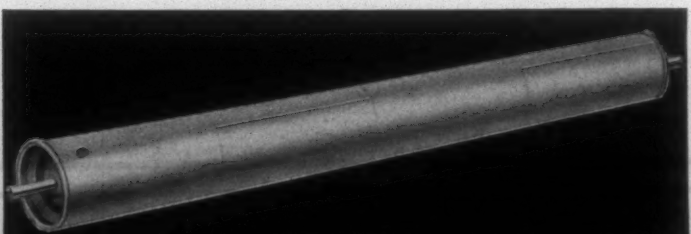

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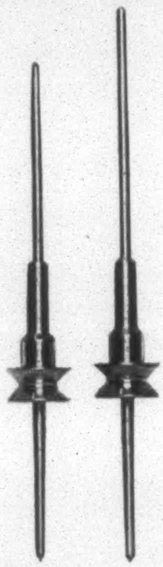

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1,000 members of the cotton and allied industries will participate in the sessions." At the Atlanta meeting approximately 850 farmers, ginners, warehousemen, merchants, spinners and cottonseed crushers jammed the meetings at which plans for the 1948 industrywide promotion and research program were laid.

Cotton manufacturers associations of both North and South Carolina recently have announced dates for their next annual meetings. The Cotton Manufacturers Association of South Carolina will meet May 27-29 at the Grove Park Inn, Asheville, N. C., it was made known by John K. Cauthen, executive vice-president of the group. The North Carolina Cotton Manufacturers Association will hold its 42nd annual meeting Oct. 14-15 at Pinehurst, N. C. Hunter Marshall of Charlotte, secretary-treasurer, reports that the program for the event will be announced later.

1948 Wool Support Prices Announced

The U. S. Department of Agriculture on March 26 adjusted its prices for 1948 clip wool, as required by law, to levels which will assure producers an average price equal to that received in 1946. The changes are designed to offset higher marketing costs and to maintain normal differentials between graded wools. The effective date of these changes was April 1. All wool appraised or reappraised for purchase after this date is subject to the new price schedule.

Support prices for 1948 clip shorn wools, except "off wools," are increased by one per cent a pound, clean basis. This change is designed to compensate for higher freight rates on wool. In addition: (1) all graded shorn wools of average French combing or better, including fine to quarter-blood wools, will be one to two cents a pound higher; (2) scoured wools will be three cents a pound higher; and (3) best and average eight-months and fall Texas wools will be one cent a pound higher, clean basis.

Similar increases of one cent per pound, clean basis, will be made in the purchase prices for pulled wool, with two cents per pound, clean basis, added for certain grades of worsted type pulled wools. No other changes are contemplated in the operation of the support program for 1948 wool at this time. As in the past, approved wool handlers will act as agents of the Commodity Credit Corp. in making the purchases and in handling the wool.

Institute Holds Executive Conference

Approximately 100 textile executives representing member mills from New England into the deep South gathered in Charlottesville, Va., April 8-10 for the first annual Executives Conference of the Institute of Textile Technology. Many pertinent subjects were discussed during the conference with much attention being devoted to the heating and drying of textile materials.

Steps were sought to be taken to improve drying and heating operations in the textile process and phases covered included limitations of present textile drying techniques and possible applications of such methods as infra-red radiation and high-frequency dialectric heating.

Drying efficiency can be increased about 20 per cent by a properly designed system, according to Charles A. Casey, who presented a paper on "Technical and Economic Factors in Textile Drying." Mr. Casey gave estimates of direct operating costs obtained by test runs on several driers. He stressed the importance of removing water vapor. Others who discussed this subject included Dr. Ralph W. Feil, Dr. W. T. Ham, Jr., Dr. A. C. Walker and C. W. Conquest.

As a result of these discussions, a liaison committee was named to co-ordinate work at the institute with work at the mills, machinery manufacturers and utility companies. This committee consists of R. H. Tuttle, Fieldcrest Mills of Marshall Field & Co.; Dr. Thomas G. Hawley, United Merchants & Manufacturers Corp., New York; M. J. Baryill, engineering director of Avondale Mills, Sylacauga, Ala.; Edwin M. Clapp, vice-president, Georgia Power Co.; W. Paul Lyman, Carolina Power & Light Co.; T. L. Bissell, Alabama Power Co.; Paul H. Goodell, vice-president, Trumbull Electric Mfg. Co.; Ira J. Barber, vice-president, Fostoria Pressed Steel Corp., and E. S. Lammers, Westinghouse Electric Corp. The committee is to meet soon to formulate plans for future co-operation.

Dr. Warren F. Busse, new technical director of the institute, described the institute's research program, telling members that "in the last analysis the purpose of this institute from your viewpoint is to help you make money by helping you to make your products better and cheaper and thus help you keep your markets in the fact of competition from other industries and other products, ranging from paper to wire and glass." The problems of the member mills, he declared, are the research problems of the institute.

Objectives of institute research projects, he said, are cheaper or better raw materials, cheaper or better processes, and cheaper or better products. Dr. Busse said the work of the research staff consists of "asking nature the answers to three questions: 'What are the properties of your present raw materials?' 'Why do the present raw materials, processes and products have these properties and behave as they do' and 'How can we make your raw materials, processes and products cheaper and better, or make them fit a special need of your customer?' "

Dr. Earl K. Fischer discussed the various instruments designed and adapted by the physical chemical division better to measure the various properties of fibers, with the aim of eliminating the uncertainty of personal judgment.

"Physics and Textiles" was discussed by Dr. A. F. Robertson, who noted that, outside of fundamental or long-range research, the physicist carried on development work which involves construction of new instruments or processes to meet specific needs, and demonstrating that they are possible for application in industry and save mills money.

The chemical engineer, Lawrence C. Leatherland emphasized, considers cost feasibility first, simplicity of operation and maintenance in designing new processes. The value of chemical engineering to textiles, he noted, lies in its knowledge of unit operations, such as fluid flow, heat transfer and temperature and pressure control.

Robert Milliken of Deering, Milliken & Co. was elected chairman at a meeting of the Institute's new board of trustees. He replaces William N. Banks of Grantville (Ga.) Mills.

Ward Delaney of Charlottesville was re-elected president of the institute while Luther Hodges was named vice-chairman; Arthur M. Allen of Hinchley, Allen and Tillingheast of Wheeler, R. I., secretary, and C. G. Allen, assistant treasurer. Norman E. Elsas of Fulton Bag Co., Atlanta, was elected treasurer, succeeding Milliken.

The new trustees, who will serve three-year terms, are:

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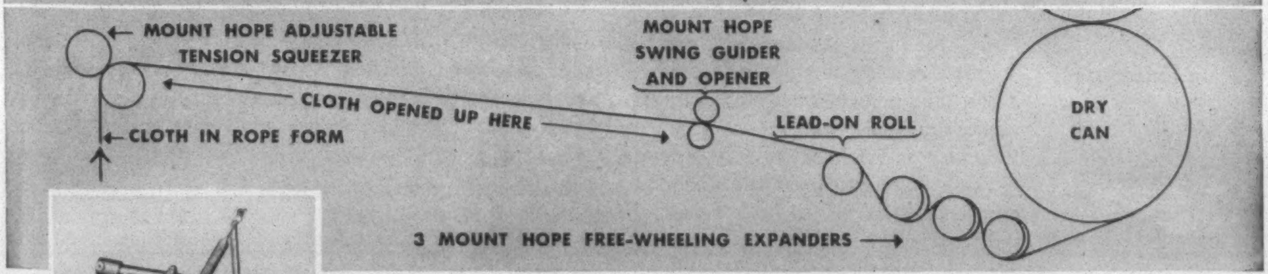
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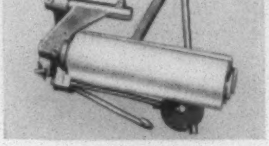

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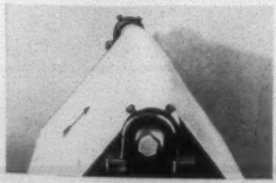

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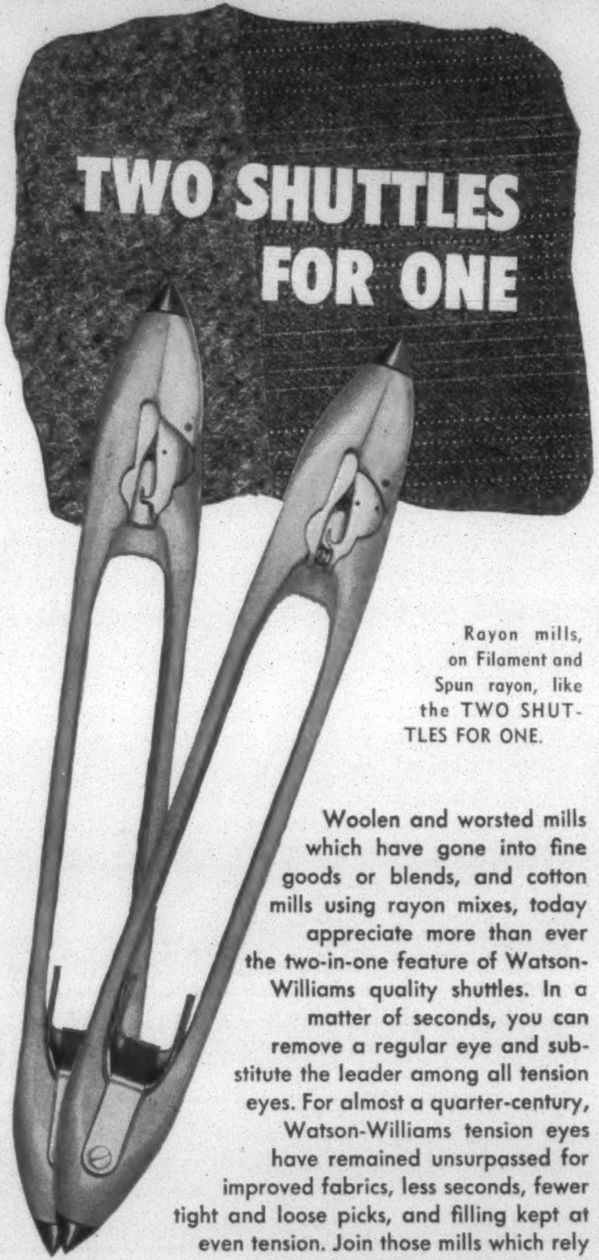

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Donald B. Tansill, vice-president of Pepperell Mfg. Co.; G. O. Lienhard, president of Chicopee Mfg. Co., New Brunswick, N. J.; J. P. Holt, vice-president of Aberfoyle Mfg. Co., Philadelphia, and Gordon Osborne, president of Warwick Mills, Boston. Arthur B. Borden, vice-president of Borden Mills, Inc., New York, was chosen trustee to serve out the year remaining in the unexpired term of the late J. A. Moore of Sterling Cotton Mills, Franklinton, N. C.

Plans for the Stuart W. Cramer seminar building were approved by the trustees and the need for still more buildings and equipment at the institute was emphasized.

Featured guest speaker during the event was Fleet Admiral William F. Halsey, U. S. Navy (Ret.), who addressed the gathering at an informal dinner in the country club adjoining the grounds of the institute.

A. S. T. M. Committee D-13 Holds Meeting

Committee D-13 of the American Society for Testing Materials met in New York City last month and heading a long and varied list of subjects of uppermost importance discussed were the proposal to adopt a new and standard definition of rayon, resulting from a need occasioned by the contemplated synthetic textile labeling requirements, and an attempt to establish a new test procedure for cotton fiber tensile.

To be voted upon by letter ballot of members of two concerned committees of D-13, the definitions submitted for approval were: *rayon*, a generic term for man-made fibers, monofilaments and continuous filament yarns composed of regenerated cellulose with or without lesser amounts of non-fiber forming material; and *estron*, a generic term for fibers, monofilaments and continuous filament yarn made by man from one or more esters of cellulose with or without lesser amounts of non-fiber forming material.

If the vote is favorable, the definitions would be published as "tentative standards" after the June meeting of A. S. T. M. It is pointed out that further action would be required before the new definitions become standards, but that this action could possibly take place at the October meeting of D-13.

A new test procedure for cotton fiber tensile was presented by J. K. Phillips of Goodyear Research Laboratories, who stressed the need for a common terminology for expressing tensile results. Mr. Phillips stated that the ultimate purpose of the modifications proposed in cotton fiber tensile measurements was to obtain reliable fiber tensiles which would compare favorably with the tensile values realized in subsequent cotton products and at the same time afford a means of comparing cotton tensile with tensile values of other textile fibers. He recommended that A. S. T. M. Committee D-13: (1) Specify the expression of tensile strength for textile materials as strength per unit as in grex or denier systems; (2) include as an alternate method the testing of fiber tensile on the Scott IP4 machine or other machines with comparable test speeds and; (3) include as an alternate method a test length between 2.5 mm. and 5 mm. for cotton fiber tensile measurements. The subcommittee on cotton voted to join with other fiber sections and with the subcommittee on test methods in testing the new procedure and also requested that the cotton and fiber branch of the Department of Agriculture make a thorough investigation of the new test method.

Dr. Walter J. Hamburger, Fabric Research Laboratories, Boston, speaking on "The Stress-Strain Curve as a Laboratory Tool in Textile Research," told members that textile materials can be properly engineered by essentially the same techniques as those employed by the civil engineer, provided performance characteristics are properly determined and accounted for. "The production of textile yarns and fabrics has been an art rather than a science," he stated. "The ever increasing demand upon industry to produce fabrics for specific end-uses, establishes the need for an engineering approach to the solution of many complex problems which arise, when an attempt is made to design textile structures on a scientific basis." Dr. Hamburger declared that the stress-strain curve is the basic source of information necessary to an intelligent analysis of the mechanical behavior and performance characteristics of textile structures. "A thorough study and interpretation of its implications is absolutely essential if it is to be employed practically, as the powerful tool which it is," he added. The effect of radiant heat was also discussed by Dr. Hamburger at the session on abrasion testing, during which demonstrations or analyses of the work of four leading types of machines were featured. Results of tests indicated the need for certain improvements in the various machines, it was reported.

Dr. Hamburger pointed out that while glass and nylon were individually almost flameproof, they had been found sometimes to burn with great rapidity when combined into a single fabric. Considering the same subject, a fabric found to be flame-resistant burned rapidly when tested in a thickness of two or three layers, according to R. D. Wells of Bates Mfg. Co. The subject was originally brought up by Kenneth H. Barnard of American Cyanamid Co., who pointed out that the present A. S. T. M. vertical strip test was devised for heavy fabrics and was working an injustice, since none of the lighter fabrics could pass as a consequence of which they were barred in many places.

"The Importance of the Time Factor in the Study of Textile Properties" was discussed by Prof. Edward R. Schwarz of the Massachusetts Institute of Technology, who declared it is essential in textiles that the element of time during which the force is being applied and also during the period of recovery from deformation be taken into account. The development of physical testing of textiles from the period in which time was not considered, through the attempts to control time, to the modern practice of studying

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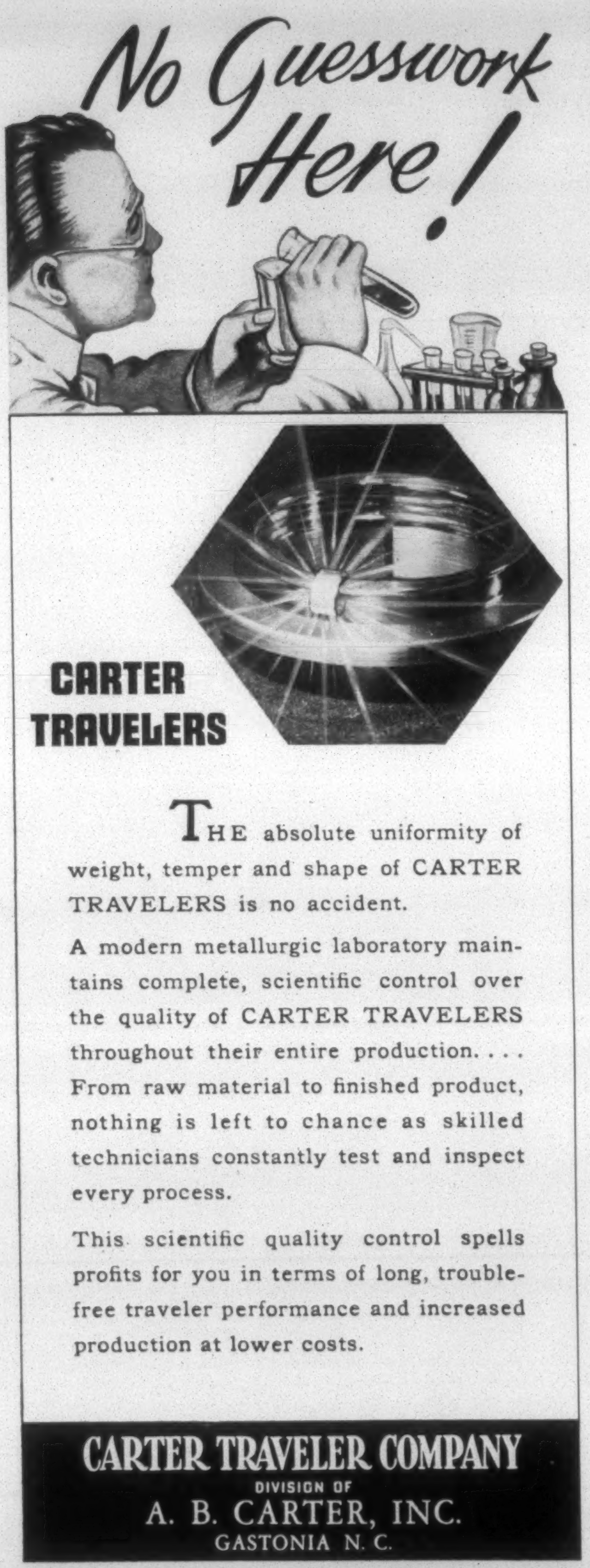

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the effect of variations in time was reviewed briefly by Dr. Schwarz. "Some Applications of Stress-Strain Measurements to the Determination of Fiber Properties" was considered by Dr. Arnold Sookne of Harris Research Laboratories, who stated that intelligent testing or evaluation of a fiber must be preceded by a thorough study of fiber properties in relation to the contemplated end use.

Should A. S. T. M. adopt *estrone* as the standard generic term for cellulose ester fibers, it is reported that the Federal Trade Commission will not act immediately but will study the effect upon the consumer public. The American Viscose Corp. is one of the trade leaders known to oppose the change in name and British sources continue to oppose the change, as they would like to see the United States use rayon as the family name for all man-made fibers.

Plan Addition To N. C. Textile School

Plans for a new addition to the North Carolina State College School of Textiles building, Raleigh, have been approved by Gov. R. Gregg Cherry and Budget Director R. G. Deyton. The last General Assembly made available $450,000 for the project and it remains to be seen what portion of the planned job can be constructed with that sum. The addition, as presently planned, would be in the form of a double wing to the present building, each containing a basement and three floors. When completed, the addition will add about 53,000 square feet of floor space, giving the school of texitles about 80 per cent more space than it has at present.

Alabama Manufacturers Elect Stumberg

B. G. Stumberg of the Mt. Vernon-Woodberry Mills, Inc., plant at Tallassee, Ala., was elected president of the Alabama Cotton Manufacturers Association at the tenth annual convention of the group held in Biloxi, Miss., April 2-3. Mr. Stumberg, long active in the service of the association, succeeds Claude M. Elrod, president of Boaz Mills, Inc., Boaz, Ala., who became association board chairman. More than 200 association members, suppliers of the industries and their guests attended the two-day event.

Speakers heard during the event, in addition to association officers, included Rupert L. Murphy, traffic manager and attorney of the Georgia-Alabama Textile Traffic Association; Earl M. Heard, vice-president in charge of research of West Point Mfg. Co., West Point, Ga.; Dr. Lee Bidgood, dean of the school of commerce and business administration, University of Alabama; Frank S. Constangy, attorney, Atlanta, Ga.; and Thomas D. Yutzy of New York.

Mr. Constangy, discussing "Labor Management Relations Act—1947," told those in attendance that industry has nothing to fear from an impartial administration of the Wagner Act as it is now amended. The Taft-Hartley Act, in effect seven months, is working admirably, he said. While many phases of the labor management relations act need interpreting, he added, the over-all effect has been heartening and satisfactory.

The textile industry's program for public relations was reviewed by Mr. Yutzy, who told the group that its public relations is a form of insurance to preserve the industry's future as a democratic keystone. "The textile industry will always have public relations and it is good business to strive to see that it is good public relations," he said.

Cotton mills were faced with more demands for freight increases on their products during the past year than ever before, according to Mr. Murphy. In those applications disposed of by the Interstate Commerce Commission, he pointed out, the carriers, with certain exceptions, have been granted the increases they sought. Traffic associations have participated in more cases than in any previous year, he said, and during the coming year all indications point to a continued large number of textile traffic freight cases effecting the interest of the mills as a whole.

The part the cotton textile industry would be called on to play should another war come was discussed by Mr. Elrod, retiring president of the group, who succeeded Homer M. Carter of Pepperell Mfg. Co., as chairman of the board. "If we are called on for mass production we have already shown that we can deliver," Mr. Elrod said, "and if necessary we will deliver again, but to do this we do not need production controls or priority ratings." Confidence, he declared, is the thing most needed today.

Mr. Heard told the manufacturers that "cotton mills are now beginning to spend money to learn more about what they are doing. It is most encouraging." He stressed the need for research in the cotton textile industry, explaining that testing alone is not the answer, that mills must analyze and interpret their test results.

Businessmen were urged by Ted Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, to awaken to their responsibilities in legislative matters by making certain that competent men were elected to office and by testifying before legislative committees. They were also advised to inform all persons with whom they had contact of the effect on business and the public welfare of proposed legislation. In line with Mr. Forbes' remarks were those of Dr. Bidgood of the University of Alabama, who spoke on democracy.

Paul A. Redmond, Jr., of Alabama Mills, Inc., Birmingham, was elected vice-president of the association, the post vacated by the new president. Thomas D. Russell of Russell Mfg. Co., Alexander City, was named treasurer. Dwight M. Wilhelm, executive vice-president, will continue in that post.

Elected to the board of directors for three-year terms were Joe L. Jennings, West Point Mfg. Co.; D. H. Morris, Geneva Cotton Mills, Geneva, Ala., and Hugh M. Comer, Avondale Mills, Sylacauga, Ala. They replace Joe L. Lanier, West Point Mfg. Co.; J. T. Phillips, Buck Creek Cotton Mills, Siluria, Ala., and J. Craig Smith, Avondale Mills.

Hugh Comer was toastmaster at the annual banquet, at

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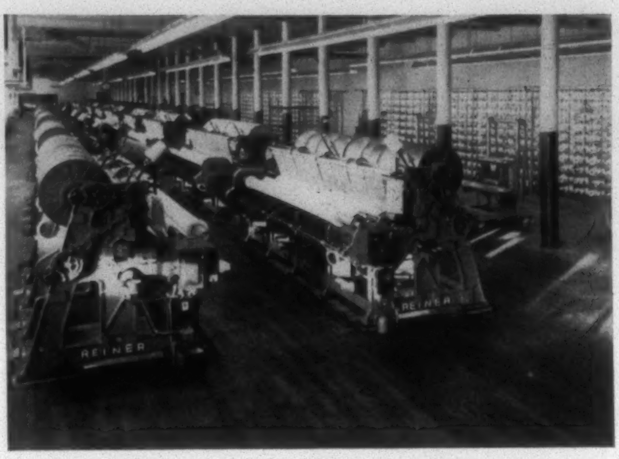

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which Dr. Waights G. Henry, Jr., of Atlanta, was the speaker. Presentation of the Comer Safety Trophies and the association's golf tournament prizes were a feature of this session. Huntsville Mfg. Co., Huntsville, and California Cotton Mills, Uniontown, were awarded trophies for having the best safety records. The award for the best golfer went to Bill Terrell of Terrell Machine Co. who, without benefit of a handicap, shot a 75 to win low gross. He defeated Louis Kirby of Calco Chemical Co., West Point, Ga., who scored a 76 with a ten handicap for second honors. For millmen, E. S. Bennett of Dallas Mfg. Co. was low, with 91 and a handicap of 25, which won for him the association cup and a silver platter. C. P. Eldred of Bemis Bag Co. was runner-up with a 71, handicap 15.

Homer Carter was presented a wrist-watch in appreciation of his "fine work and seasoned leadership" of the association as president and chairman of the board. Holmes Floyd of Opelika (Ala.) Mills made the presentation. Mr. Carter presided at the association's final session, which also heard the annual reports of the various committee chairmen.

British, U. S. Textile Aims Told In Report

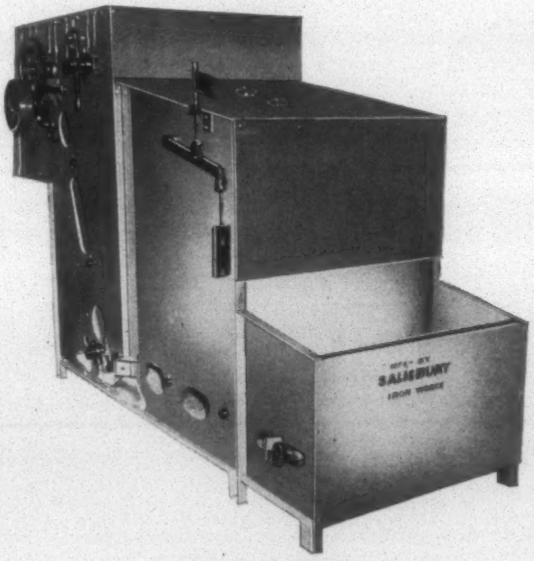
The American Cotton Mission has returned to this country after a series of conferences with British delegates early in April at Lancashire and London, England. As a result of these conferences, a joint report was prepared in which the export aims of the United States and British cotton textile industries, raw cotton, the Japanese textile situation and currency problems were fully dealt with. Delegates from both countries were hopeful that recommendations in the report would be supported by their respective governments.

Conference discussions disclosed that United States cotton manufacturers were making their plans for equipment and production with the intention to "maintain their export business at no less than present levels." Technically, says the report, their plants are all based on mass production, and export outlets are required to absorb such output.

Furthermore, it continued, "national security makes it necessary to maintain our current productive capacity in good order. Sound national economy in peace requires maintenance of consumption of American cotton and many American mills are so located that alternative forms of employment are not readily available for workers, so that a decrease of markets followed by a reduction in production would cause unemployment."

British delegates stressed that their industry was seeking to increase production to enlarge its exports. They said they had no reason to complain of United States competition in the common export market, which British suppliers would meet in the normal way by price and quality. Once conditions are restored to normality, the British industry would not wish that a dollar shortage should result in conditions being imposed which would impede United States exports. As part of the generally co-operative policy agreed on at the conference, the British delegates will intimate to the British government that this is their attitude.

The report states also that different methods of production and selling would lead to each country's ensuring the



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trade for which its industry was best adapted. There is hope, says the report, for a common and combined interest of the textile industries of both nations in the export field, where the two countries could face together whatever problems, economic or political, the future might have in store.

Both delegations agreed that the increased use of American cotton was vital to the welfare of their respective industries. The British industry was largely built up on American cotton, and currently is planning a very substantial part of its future production in types of yarns and fabrics for which American cotton, especially the superior grades, would be the ideal raw material. As dollar difficulties are progressively overcome, the British industry intends to be a steadily increasing customer, and the British delegation will recommend to its government the removal, so far as possible, of restrictions retarding the consumption of American cotton.

A sharp cut in the textile potential of Japan was called for in the report with the recommendation that the Japanese should be limited to 3,500,000 spindles, compared with eight million before the war and about two million now. The British agreed, however, that their government should arrange for Japan to barter her textiles or sell them for British pounds in the sterling areas, on a basis which will not cause any drain of dollars. If a barter deal is made, they said, the commodities received in exchange should be consumed entirely in Japan or the United States.

The *Manchester Guardian,* internationally known newspaper, editorializing on the proposed Japanese limitation, saw the move as "an unashamed agreement between the British and American industries to give themselves enough room in which to live happily together by taking it out of someone else." The Japanese may be driven to an extreme dependence on their textile exports to pay their way after the Americans have left Japan and may, by their desperate measures, severely damage Lancashire's trade, the paper stated. "It is a great pity," the *Guardian* continued, "that the conference has marred its excellent work by so extreme and unpractitcal a proposal. It must be hoped that in discussions with the American government it can be moderated to something that might be a permanent safeguard for Lancashire's trade."

Dr. William P. Jacobs, president of the American Cotton Manufacturers Association, and who was in attendance at most of the Anglo-American conferences, recently stated that he considers the Draper Mission report on Japan's textile industry a "sound and constructive one," and not at variance with the views of members of the American Cotton Mission to England. The mission to Japan, headed by

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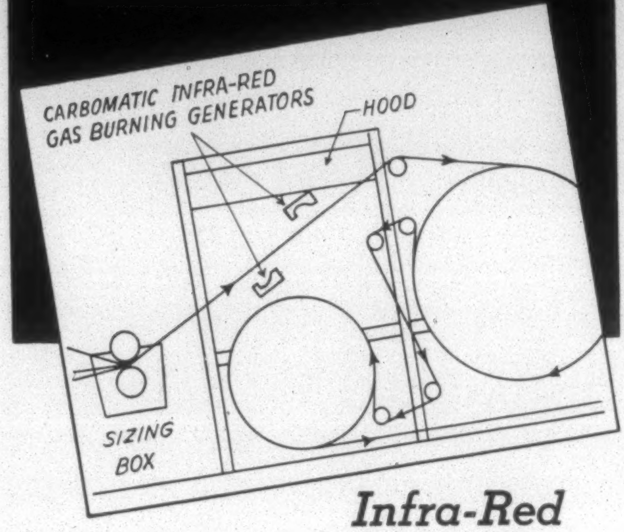

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Undersecretary of the Army William H. Draper, had emphasized the belief that Japan's natural textile markets lay in the Orient. Members of the mission were quoted upon their return as being in favor of allowing Japan to compete with other nations for its historical market. However, reports from London state that the Draper recommendations brought equally adverse criticism from both British and American conference delegates.

The 3,500,000 spindle limit recommended by the conference is not to be regarded as rigid, the report emphasizes, and would be open to periodical review.

British delegates predicted that international cotton trade will never recover its pre-war volume. Lancashire delegates told the group that future trade is unlikely ever to rise much above the present level and forecast a scramble among exporting nations to what markets remain. A spokesman for the United States delegation estimated world trade last year as only 45 per cent of the 1939 total.

The Lancashire delegation's survey said most of the principal importing nations have developed their own cotton industries since 1938 to a "marked" degree. Traditional markets such as South America, the Near East and the British dominions now threaten to provide their own needs, the survey said.

Delegates Named For International Meeting

The United States will be represented at the first meeting of the committee on textiles of the International Organization for Standardization (I. S. O.) at Buxton, England, June 7-12, Vice-Admiral George F. Hussey, Jr., U. S. N. (Retired), secretary of the American Standards Association, announced April 9. Delegates have already been named by the American Association of Textile Chemists and Colorists, the American Council of Commercial Laboratories, the American Society for Testing Materials, the National Bureau of Standards, the National Federation of Textiles, and the National Retail Dry Goods Association. They will act as representatives of the American Standards Association, which is the United States member of the International Organization for Standardization.

A meeting of the delegates was to be held April 23 to discuss plans for the meeting.

The delegates appointed up to the present time are: Dr. W. D. Appel, textile section, National Bureau of Standards, Washington, D. C.; appointed by the National Bureau of Standards. Prof. H. J. Ball, Lowell (Mass.) Textile Institute, chairman of A. S. T. M. Committee D-13, on textile materials; appointed by the American Society for Testing Materials. J. R. Bonnar, technical director, General Dyestuff Corp., New York, N. Y.; appointed by the American Association of Textile Chemists and Colorists. D. E. Douty, chairman, board of directors, U. S. Testing Co., Hoboken, N. J.; appointed by the American Council of Commercial Laboratories and the National Federation of Textiles. Julius B. Goldberg, J. P. Stevens & Co., New York, N. Y.; appointed by the National Federation of Textiles. William Shear, president, Leo Shear & Co., Inc., Evansville, Ind.; appointed by the National Retail Dry Goods Association. The Textile Section of the New York Board of Trade has

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announced that it will be represented, but has not as yet named its delegates.

Vice-Admiral Hussey, secretary of the American Standards Association, will also attend the meeting as a delegate. The meeting will make recommendations as to how the international work on standards for textile equipment, nomenclature and definitions, and test methods will be set up.

In the opinion of the national associations that recommended American representation at the June meeting, the secretariat for much of this work should be assigned to the United States. This applies particularly to the test methods because of the large amount of work which has already been done on textile test methods in this country and the extensive laboratories and research facilities that are available here. They will also ask for the secretariat for the international definition of rayon. The secretariat for a project carries with its responsibility for seeing that the work on the project moves forward.

The International Organization for Standardization is made up of the national standardizing bodies of 26 countries and is a specialized agency of the United Nations. Its work is directed toward correlating the standards of the various member countries, in order to promote better understanding between producer and purchaser in international trade, and to break down trade barriers by increasing interchangeability of parts and co-ordination of test methods.

Textile Institutes Plan Celebration

R. C. Dick, president and treasurer of Naumkeag Steam Cotton Mills, has been elected general chairman of the New Bedford (Mass.) Textile Institute Golden Jubilee Celebration Committee. Mr. Dick announces an active three day program, May 13-15, woven about the Textile Institute, the Wamsutta Club, the New Bedford Country Club, and high-lighted by the golden jubilee banquet May 14 with Russell Fisher, president of the National Association of Cotton Manufacturers, John P. Desmond, Commissioner of Education of the State of Massachusetts, and Harold B. Sturtevant, vice-president of the alumni association, as speakers. Details of the program and names of the mill men who are members of the executive committee will be announced later. The school has had over 20,000 in attendance and over 5,000 graduates.

The annual meeting of the Lowell Textile Institute Alumni Association will be held May 7-8 at Lowell, Mass., instead of the previously announced dates in April, according to the association's president, J. Milton Washburn, Jr. The meeting this year will center around the dedication of

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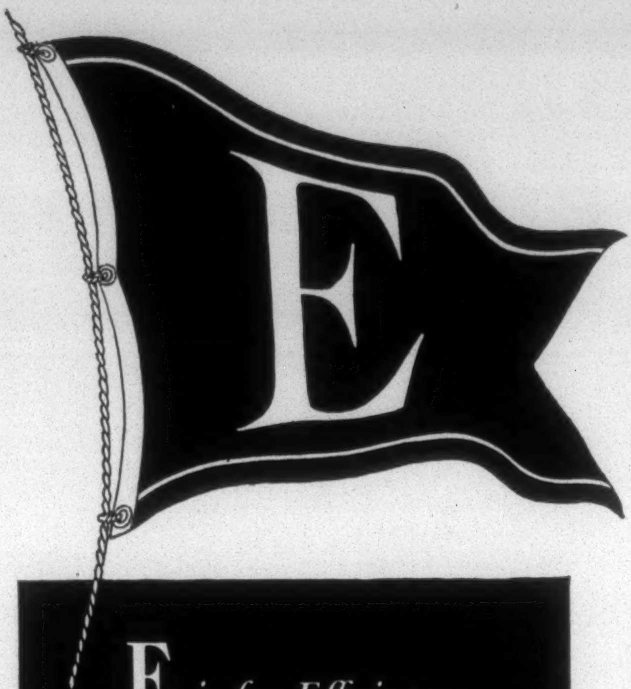

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the new dormitory and the first report on the association's drive for funds to build a new library building at the institute. A feature of the regular business meeting will be the presentation of honorary awards to outstanding members of the industry.

Program For Industrial Safety Conference

The program for the 18th annual statewide Industrial Safety Conference, to be held May 6-8 at the Hotel Sir Walter, Raleigh, N. C., recently has been announced and includes three textile sessions. The conference is sponsored by the North Carolina Industrial Commission.

The program for the textile sessions follow: General Textile Section, May 6, 2:15 p. m. Chairman, John M. Scott, personnel director, Rocky Mount Mills, Rocky Mount. "Safety Through Employee Training," speaker to be announced. "We Do It This Way," C. J. Hyslup, safety director, Chatham Mfg. Co., Elkin. "The Superintendent Looks at Safety," Tom Tolar, superintendent, Plaid Mills, Burlington. "The Modern Textile Safety Program," Ray Ketchmark, industrial department, National Safety Council, Chicago.

The Hosiery and Spinning and Weaving Divisions of the Textile Section will hold separate sessions May 7 at 2:15 p. m. Their programs follow: Hosiery Division—Chairman, B. C. Hall, safety director, Hanes Hosiery Mills Co., Winston-Salem. "Our Industry, Too, Needs A Safety Program," Thomas N. Ingram, personnel manager, Chadbourn Hosiery Mills, Inc., Charlotte. "What Our Safety Program Has Done For Us," Cecil F. Adamson, secretary, Wilkes Hosiery Co., North Wilkesboro. "The Personnel Director's Part in A Safety Program," J. D. Boyd, personnel director, Melrose Hosiery Mills, Inc., High Point. Spinning and Weaving Division — Chairman, Jack Wysong, personnel director, Carolina Mills, Maiden. "Accident Control in Opening and Carding," C. C. Hinson, personnel and safety director, Erlanger Mills, Lexington. "Accident Control in Spinning," Ray Griffin, overseer spinning, St. Pauls Rayon Mill, St. Pauls. "Accident Control in Weaving," C. C. Mulholland, overseer weave room, Plant No. 6, Erwin Cotton Mills Co., Durham. Panel discussion, "Our Program," led by Herman Taylor of The Kendall Co., and including Walter J. McNeill, overseer spinning, Robbins Cloth Mills, Robbins; J. Ernest Garrison, overseer, Ossipee Weaving Co., Elon College; and M. R. Harden, superintendent, Erwin Cotton Mills Co.

Rayon Shipments Show Large Increase

Rayon shipments in March totaled 90,800,000 pounds, an increase of 19 per cent above shipments in the corresponding month last year, according to the April *Rayon Organon,* statistical bulletin of the Textile Economics Bureau, Inc. First quarter domestic rayon shipments amounted to 264,600,000 pounds, an increase of 18 per cent over the first quarter of 1947.

Filament yarn shipments in March totaled 67,900,000 pounds (46,300,000 of viscose-cupra and 21,600,000 pounds of acetate) and staple deliveries amounted to 22,900,000 pounds (15,500,000 viscose and 7,400,000 pounds acetate). In the first quarter of the year rayon filament yarn shipments totaled 198,900,000 pounds, of which 133,400,000 pounds were viscose-cupra and 65,500,000 pounds were acetate. Staple deliveries in the January-March period

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totaled 65,700,000 pounds (44,500,000 pounds viscose and 21,200,000 pounds acetate). Rayon stocks in the hands of producers at the end of March amounted to 14,200,000 pounds as compared to 14,100,000 pounds at the end of February and 10,700,000 pounds at the end of March, 1947.

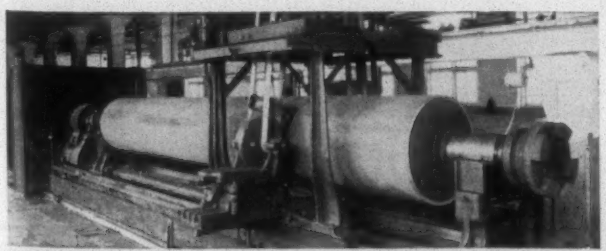
Imports of rayon staple during January, 1948, amounted to 2,114,000 pounds, almost twice the amount received in December but 63 per cent below shipments from abroad in January, 1947. Largest suppliers in the first month of this year were Great Britain, Holland, Belgium and France. The appearance of Spain on the staple exporters to the United States is noteworthy, the *Organon* points out.

An analysis of rayon and synthetic textile exports by the United States made by the *Organon* indicate that the total dollar value of goods shipped out of the country last year amounted to $307,744,000, an increase of 118 per cent over 1946 and more than 20 times 1939 exports. In terms of physical volume, it is estimated that the poundage equivalent of 1947 exports of all types of rayon products amounted to 129,000,000 pounds, 73 per cent above the previous year and ten times the amount shipped in 1939.

It must be noted, the *Organon* points out, that exports during the first half of 1947 were larger than those in the second half year in practically all categories. Starting at mid-year, there was a decline in the volume of rayon exports as foreign buyers began to run short of dollars and restrictive import measures were adopted by foreign countries to protect their own textile industries. Based on present export trends, the *Organon* states, it does not appear likely that 1948 exports of rayon textiles will match last year's performance.

Although there was an increase in the exports of rayon and other synthetic waste, staple and yarn, during 1947, it did not match the increase in exports of piece goods. In the raw material category, rayon and other synthetic yarn exports amounted to 28,485,000 pounds last year, an increase of 63 per cent over the previous year. Staple exports, including waste amounted to 5,434,000 pounds, an increase of 18 per cent. Exports of viscose tire cord and yarn last year amounted to 5,886,000 pounds, an increase of 43 per cent. Nylon yarn exports in 1947 totaled 1,095,000 pounds, a substantial increase over 1946 but less than the wartime exports during 1943 and 1944.

Exports of rayon piece goods (non-pile and excluding tire fabrics) in 1947, reaching a new peak of 230,670,000



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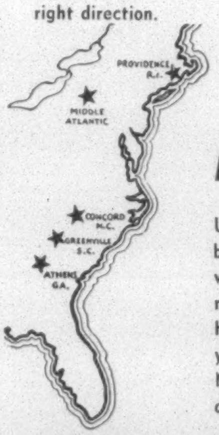

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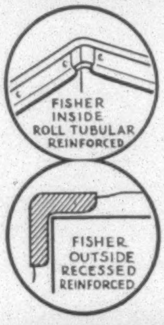

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square yards, were more than double the 1946 volume. Converted to linear yards, this figure was equivalent to about 13 per cent of the 1947 production of rayon broad woven goods, as against six per cent of the 1946 total output. The major markets were the Philippine Republic, Cuba, Australia and India.

Exports of rayon tire and fuel cell fabrics amounting to 19,499,000 square yards were 48 per cent above the previous year. Mexico, Canada, Australia and Argentina were the largest importers. Exports of rayon knit fabrics in the piece were 109 per cent above 1946.

Analyzing the increase in value of exports, the *Organon* notes that the average value of filament yarn exports (textile and tire yarn) rose from 70 cents per pound in 1946 to 97 cents per pound in 1947, an increase of 38 per cent. The outstanding example of increase was in acetate filament yarn, where the average per pound value rose from 80 cents in 1946 to $1.16 in 1947, or by 45 per cent. It should also be noted, according to the *Organon,* that of the 9,500,000 pounds of acetate yarn shipped abroad, domestic rayon producers themselves exported only 3,300,000 pounds.

An analysis of production of all types of broad woven goods shows that the 1947 record output of rayon, nylon, silk and related broad woven goods amounting to 1,994,000,000 yards, was 20 per cent of the total cotton broad woven goods output. Last year's production of these goods were ten per cent over the 1946 level and 41 per cent above 1939.

Output of 100 per cent filament yarn fabric showed an increase of 15 per cent above the previous year and only slightly below the 1941 peak level. The production of 100 per cent spun rayon fabrics was the highest ever, exceeding 1946 by 54 per cent. The sharp increase took place primarily at the expense of rayon mixture and blended fabrics, which showed a loss of 30 per cent. Filament and spun rayon fabric output last year was also at a new peak, showing a six per cent gain over 1946. Production of silk and silk mixture fabrics last year held at 9,000,000 yards, the total produced the year before. Nylon, glass fiber and related fabrics output was eight per cent under 1946 and the output of rayon velvets, upholstery and tie fabrics was slightly under 1946. Nylon fabric output in 1947 was 1,000,000 yards under 1946, while production of fabrics made of glass, protein, casein fibers, etc., was down by 3,000,000 yards or ten per cent.

Plants Win Safety Achievement Awards

Many textile plants were listed among the 80 industrial units recently cited by Commissioner Forrest H. Shuford of the North Carolina State Department of Labor as having qualified for the Labor Department's Certificate of Safety Achievement. The qualifying firms, Commissioner Shuford states, reduced their accident frequency rates by 40 per cent or more last year, compared with their 1946 rates, or maintained accident rates 75 per cent below the state average for their industry.

Firms qualifying for the safety awards include: Sidney Blumenthal & Co., Caromount Division, Rocky Mount; Chatham Mfg. Co., Elkin; Harriet Cotton Mills Nos. 1 and 2, and T. W. U. A. Local 578, Henderson; American Yarn & Processing Co., Woodlawn and Nelson Plants, Mt. Holly; Wennonah Cotton Mills Co., Lexington; Firestone Textiles, Inc., Gastonia; Shuford Mills, Inc., Main Mill, Cord Mill and Twine Mill, Hickory; and the following units of Burlington Mills Corp.: Cetwick Throwing Plant, Burlington; Bellemont Weaving Co.; Greensboro Weaving Co.; High Point Weaving and Throwing Co.; Mayfair Plant, Burlington; Ossipee Weaving Co., Elon College; Puritan Weaving Co., Fayetteville; Ranlo Mfg. Co., Gastonia; Smithfield Mfg. Co.; St. Pauls Rayon Mill; and Mays Mill, Cramerton.

Southern Truck Rate Increase Suspended

The Interstate Commerce Commission, because of protests from the textile industry, has suspended until Oct. 24 haulage rate increases proposed by the Southern Motor Carriers' Rate Conference. The increases, had they not been suspended, would have been effective March 29. The Suspension Board of I. C. C., in notifying interested parties of the commission's decision, indicated that hearings would be held before October and a final decision made by that time.

Suspension of the proposed increases, requested by 481 Southern mills, Textile Distributors Institute, Textile Fabrics Association and others, merely means I. C. C. believes the controversy should be heard on its merits. Both sides—truckers and industries whose products would have to move under the higher truck rate schedules—will be given an opportunity to put their conflicting views into the record.

Under the increased proposals, it would cost 7½ to eight per cent more to ship cottons and rayons. Increases on northbound textile shipments have been calculated as ten per cent for all cotton piece goods and somewhat less for rayons, depending on hauling distance. The increases sought by the Southern Motor Carriers' Conference would have covered shipments from one point in the South to another in that area, as well as those between South and North.

Coombs Heads Textile School Deans Group

Leslie Coombs of Bradford Durfee Textile Institute was elected president of the National Council of Textile School Deans at the annual spring meeting of the group held in New York City April 5-7. Mr. Coombs succeeds L. E. Parsons, Texas Technological College. Dr. Hugh M. Brown of Clemson College, Clemson, S. C., was named vice-president of the group while Edward P. Pickard of the Textile Foundation remains as treasurer.

G. Ellsworth Huggins, president of Martel and Henrietta Mills and chairman of the Cotton Textile Industry-Wide Committee on Public Relations, was one of the principal

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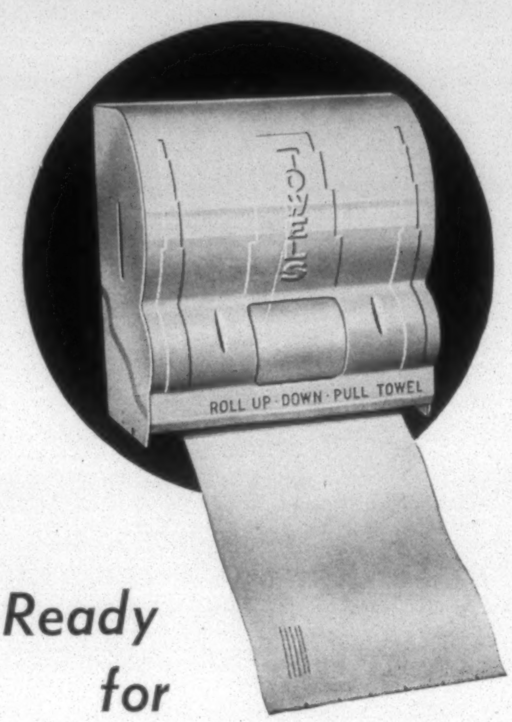

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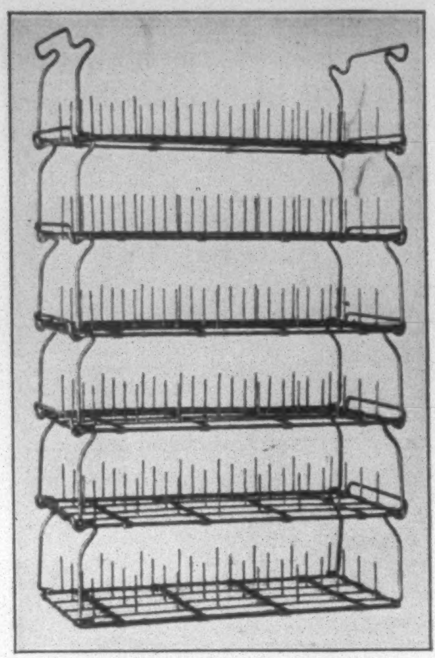
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speakers heard during the event. He remarked that for the first time in this century the cotton textile industry is able to undertake a program of wide-scale modernization, training and research which if carried out successfully can spell the end of those recurring periods of distress characteristic of the industry in the past. "Millions of dollars now being invested in new machines, rehabilitation of plants and the training of skilled personnel, will rebound to the general good of America for years to come," he predicted.

Thomas D. Yutzy, director of the industry's public relations program, and Farley A. Manning of Textile Information Service, outlined the scope of the educational and information program undertaken by the mills and pointed out many of the industry-wide program's aims were closely associated with those of the country's textile schools. John K. Whitaker, president of Neuss, Hesslein & Co., Inc., discused the export situation and stressed the need for qualified personnel to study foreign markets if America is to keep its place in world trade and compete with other exporting countries.

Military, Industry Resume Publicity Tie

The joint public relations effort which existed between the cotton industry and the armed services during World War II is to be resumed in the near future. The original tie-up began in 1942 with the National Cotton Council publicizing through its publications, its advertising and newspaper releases, the many uses which the armed services were making of cotton. The purpose was both to stress the contribution the cotton industry was making to the war effort to keep the industry and the public informed. The tie-up is now being resumed at the same point that the 1942 start was made. Ernest Stewart, public relations director of the National Cotton Council, has re-established contacts with the public relations division of all branches of the armed services, and has made arrangements to begin active work in publicizing through all available media the part cotton is playing in the current programs of the military services.

Foundation Aids Clemson Textile School

The J. E. Sirrine Textile Foundation recently set up a three-point program for aiding the faculty of the School of Textiles at Clemson College, Clemson, S. C. George M. Wright of Abbeville, S. C., president of the foundation, announced that the program would include a supplementary retirement plan for part of the faculty; addition of three faculty members to serve as relief for professors or instructors who would go into the industry for practical experience; and provide expense money for the faculty members on such leaves of absence. The Sirrine Foundation is now directing its full effort toward the improvement of the Clemson School of Textiles. Dr. Hugh M. Brown, dean, reveals that the Clemson School of Textiles is now being equipped with about $125,000 worth of new machinery that will be in place by Sept. 1.

Draper Loom Shipments Up 50 Per Cent

Draper Corp., Hopedale, Mass., shipped 50 per cent more looms in 1947 than in 1946, Thomas H. West, president, revealed in his annual report for 1947. "Furthermore," he added, "this increased production of complete machines was affected during a period when our tonnage shipments of loom repair parts and auxiliary equipment rose about 20 per cent over 1946, itself a record year." Operations in 1947 resulted in profits of $2,307,729, or $5.88 per share of capital stock, as compared with $5.07 per share a year earlier. The profit figure for 1946 is not available.

Mr. West viewed prospects for 1948 with optimism ". . . providing of course that we do not run into any serious shortages of materials, unusual expenses not forseeable at this time, or labor difficulties." A completely modern bobbin blank mill was built and put into operation during 1947. Altogether, he revealed, nearly $3 million was expended for capital improvements of properties during the year.

Coolidge Apologizes For Blast At South

Massachusetts' Lt.-Gov. Arthur W. Coolidge, whose recent remarks about "Bilbo belt banjo-strummers" kidnapping New England industries stirred up a storm of front-page controversy, has apologized to the South. Still concerned over the migrational tendencies of his area's industries, Mr. Coolidge telegraphed U. S. Senator Olin D. Johnston(D., S. C.) declaring "I regret the offense my words have caused. Bitterness is not my nature; malice was not intended. I was stirred because the program to induce Northern industries to migrate threatens the jobs of New England workers and the livelihood of businessmen." Senator Johnston had taken exception to Mr. Coolidge's remarks on the floor of the Senate. The telegram referred to Senator Johnston as "the United States Senate spokesman of the South in reproving recent remarks of mine." Lt.-Gov. Coolidge's telegram continued, in part, "I trust that Southern chivalry will prompt in all those affronted an acceptance of my apology for I do appreciate the sterling merit of Dixie. Without the war industries, agriculture, training camps and the fighting heart of the South the struggle against the Axis could not have ended so well. That record assures the future. We can work out our problems in good will. It is my hope that in this era of danger from abroad all of us as Americans will reaffirm steadfast friendship which tactless phrases of mine might impair."

The pros and cons of this controversial subject were discussed in detail last Fall in a series of six articles in TEXTILE BULLETIN, written by Leo Sonderegger, concerning the causes which prompted M. T. Stevens & Sons to transfer worsted operations of its Peace Dale Mills from South Kingstown, R. I., to Rockingham, N. C. Mr. Sonderegger's articles contained a complete analysis, and comparison be-

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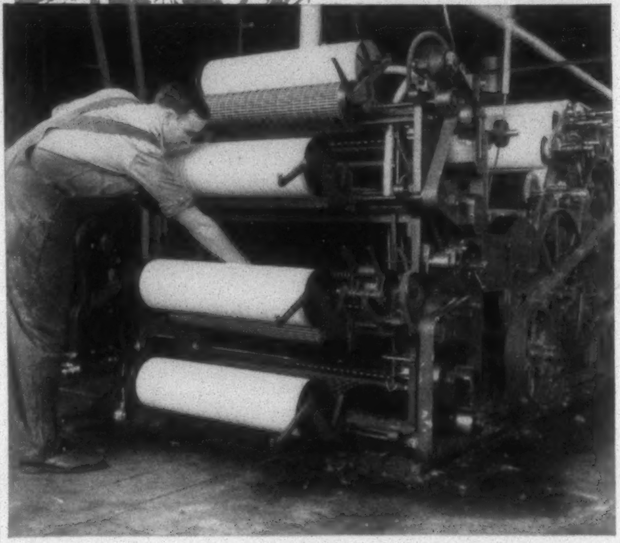

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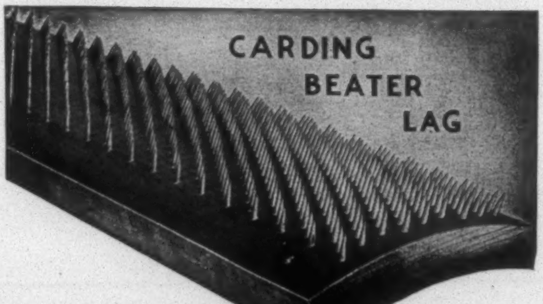

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tween North and South, of such factors as labor, insurance, taxation, production, etc., which eventually led the Stevens firm to move from Rhode Island to North Carolina.

Braiders Have Third Annual Meeting

The third annual meeting of the Braider Group of the Cotton-Textile Institute was held at the Providence (R. I.) Biltmore Hotel April 1 and 2.

The meeting was well attended by the shoe lace and elastic braid manufacturers. The following members were elected to office: A. L. Lightner, Narrow Fabric Co., Reading, Pa., chairman; Richard Ward, Shoe Lace Co., Lawrence, Mass., vice-chairman. The advisory committee members elected were: John Brown, Glencairn Mfg. Co., Pawtucket, R. I.; C. P. Berolzheimer, Diamond Braiding Mills, Chicago Heights, Ill.; H. Hebeler, St. Louis Braid Co., St. Louis, Mo.; Earl Perkins, Braided Fabric Co., Providence, R. I.

It was decided at the meeting to set up a committee whose purpose it will be to review government specifications for all parachute cord, laces, etc., with the object to recommend standards which would facilitate production in an emergency.

Output Of Rayons Up 11 Per Cent In 1947

The Bureau of the Census reports that some 1,903,000 yards of rayon broad woven goods were produced in 1947, an 11 per cent increase over production in 1946. Production also was considerably higher than in 1946 on 100 per cent filament, 100 per cent spun, and combination and spun rayon fabrics. Pile, upholstery, drapery, tapestry and tie fabrics remained about the same, but "all other rayon mixtures" dropped one-third below 1946 production.

SUMMARY OF PRODUCTION, BY CLASS OF FABRIC
(Thousands of Linear Yards)

Type of fabrics	1947	1946
Rayon broad woven fabrics, total	1,903,308	1,713,364
100% filament rayon fabrics	1,210,356	1,048,965
100% spun rayon fabrics	294,441	191,606
Combination filament and spun rayon fabrics	182,242	172,609
Pile, upholstery, drapery, tapestry and tie fabrics	46,351	46,398
All other rayon mixtures	169,918	253,786
Silk, nylon, glass and other fabrics	58,183	61,829

Seminar To Hear Beardsley Ruml

Beardsley Ruml, chairman of the board of R. H. Macy & Co., Inc., and Harry Rudick of the law firm of Lord Day & Lord will address the opening session of the Third Annual National Textile Seminar on Monday evening, May 10. Both Mr. Ruml and Mr. Rudick will discuss taxation. The National Textile Seminar is sponsored by the Philadelphia Textile Institute. It is scheduled to be held at the Shawnee Inn, Shawnee-on-Delaware, Pa., May 10 to May 14.

Scheduled for discussion at this year's sessions of the seminar by outstanding men in the industry and in public life are related matters of labor relations, research, exports and world trade. The complete program and invitations will be issued soon.

Oppose Cut In Census Appropriation

Paul B. Halstead, secretary-treasurer of the Cotton-Textile Institute, Inc., testifying recently before the Senate committee headed by Joseph H. Ball, in connection with H. R. 5607, expressed concern over the appropriation proposed by the House of Representatives in H. R. 5607 to be allotted to the Bureau of the Census for compilation of industrial statistics. In the year beginning July 1, 1946, this work of the bureau (industrial statistics) was allotted $1,852,000; the amount available under the new bill for the year beginning July 1, 1948, will be only $626,000. The work of the bureau from which cotton mills derive much advantage is the compilation and issuance of monthly and quarterly reports concerning machine operations, units of production, stocks, unfilled orders and units processed.

"The Census Bureau tells us that in the event of Senate approval of these cuts in their appropriation the monthly reports will be put on a quarterly basis and those now issued quarterly will be put on an annual basis. To us that would be most discouraging," Mr. Halstead told the committee. "We are fearful also," he continued, "that the industry will lose the services of key men on the staff of the Census Bureau if the proposed curtailment is made. A number of them have had long experience in handling textile statitstics, in arranging them with technical correctness and in making them understandable to the public. The industry prizes highly the ability of these men."

Mr. Halstead expressed sympathy and approval with the efforts to reduce the expenses of government, adding, however, that "our petition in this matter is due to particular circumstances. In the textile manufacturing and garment manufacturing trades that are served by the above mentioned reports there are employed, according to the Bureau of Labor Statistics, 2,562,000 people. In the entire range of manufacturing of this country there are employed only 12,800,000 people. These reports are business helps, therefore, to 20 per cent of the manufacturing activity of the country. They help in adjusting the volume of production to the volume of demand; they enable business men to conduct their operations in the light of vital and basic information."

Two Textile Expositions Being Planned

The International Textile Industries Exposition, which last year attracted 56,312 persons from 41 states and 23 foreign countries, will open June 7 at the Grand Central Palace, New York City, and will continue through June 12. This year, with the scope of the show considerably broadened, it is anticipated that an attendance of 100,000 will be reached.

Plans for the 15th Southern Textile Exposition, to be held Oct. 4-9 at Greenville, S. C., are being developed rapidly, according to W. G. Sirrine, president of Textile Hall Corp. Long one of the outstanding events of its kind within the industry, the Greenville exposition will have numerous exhibits of textile machinery, equipment, accessories, supplies, primary and fabricating materials and parts. This exposition will be the first post-war showing. The one scheduled in 1946 was cancelled because of many difficulties, the primary difficulty being a housing shortage in Greenville.

Legislation Seen Easing Fiber Surpluses

Present and potential "troublesome surpluses" of natural fibers, including cotton, wool, mohair and flax, will be eased, it is believed, by activities of Congress and executive agencies. Biggest single factor in reducing the possibility of a cotton surplus in 1948 or 1949, was passage of the $6

ALLEN Cotton Warper
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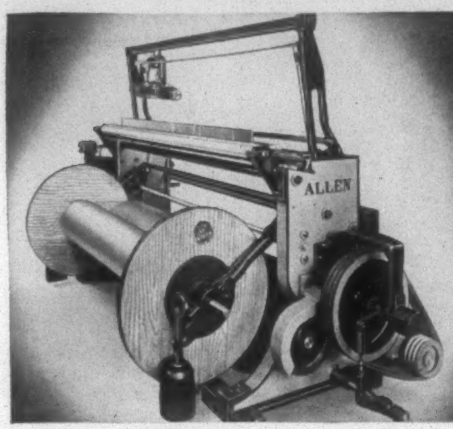
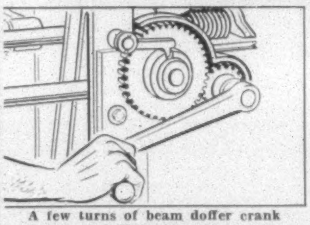
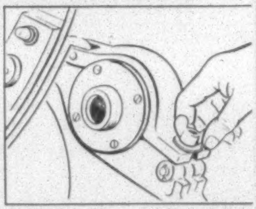




A few turns of beam doffer crank depresses ball bearing beam arm and lowers beam to floor.



Releasing wing nut frees beam by permitting ball bearing to slip off shaft ends.

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billion foreign aid measure. During the next four years it is expected that nearly 11 million bales of American cotton will be shipped to the European Recovery Program nations alone.

Millions of dollars' worth of American raw cotton will go forward to Japan, Germany, Austria, Korea and other liberated and occupied areas should Congress approve pending legislation calling for a $150 million "revolving fund" to be used by the Army to ship cotton, wool, mohair, flax (including cotton waste) to these areas for processing by textile industries. Senators from the cotton producing states are urging passage of this bill, which was initiated to carry out recommendations made by Dr. William P. Jacobs of Charlotte, N. C., Donald Comer of Sylacauga, Ala., and Fred Symmes of Greenville, S. C., after a survey of the textile situation in Japan.

Secretary of Commerce Harriman ruled March 15 that imported textiles may be dyed in the three foreign-trade zones—New York, New Orleans and San Francisco—without paying tariff charges. Mr. Harriman's ruling was made as chairman of the government's Foreign-Trade Zones Board and reversed a ruling by the Customs Bureau that the dyeing could not be done because it "amounted to manufacture." Secretary Harriman held that the operation fell short of manufacture. Foreign trade zones are ports where goods may be entered and stored without payment of duty until they move out of the zone into domestitc mommerce.

Chinese To Purchase Many Textile Items

The U. S. State Department estimated recently that the Chinese Government, in connection with the 570 million dollar China Aid Program, expected to spend 55 million dollars of its own dollar reserves for rayon yarn and floss, textile industry chemicals, dyes, pigments, paints and varnishes, leather, rubber goods and wood pulp. These expenditures, explained Secretary of State George C. Marshall, would be made between April 1, this year and June 30, 1949, since China does not have a domestic rayon industry, about three million dollars worth of rayon will be obtained from Japan for blending with Chinese silk. This amount will buy some 1,000 tons of yarn and floss, it was estimated. Acids, bleaching powders and alkalies and other chemicals would cost about four million dollars while $10,080,000 would be spent for aniline and other coal tar dyes, artificial indigo, pigments, printing inks, tanning material, sulfur black and zinc white. Three million dollars was indicated as the total for oils, fats and waxes to be used largely in making soap.

Story Of Comer Family Told In Book

The story of the Comer family, closely associated with the development of Alabama and the growth of the textile industry in that state, is told in a recently published book written by Anne Kendrick Walker, *Braxton Comer—His Family Tree from Virginia Colonial Days.* The author opens the story with the emigrant James Moss landing in Virginia during the years of its colonization in the early part of the 18th century, and then traces the family to Georgia and Alabama. Reviewing the book for the *Birmingham News-Age-Herald,* Alyce Walker refers to Donald Comer, present head of the family, as follows: "Those who have had the great privilege of association with Donald Comer, head of the family now, have had their life enriched. Time and again we have sat in on Birmingham Board of Education meetings and seen in action his fine love of fellow man, his keen intellect and broad vision. Though he retired several years ago from active business, he's been hard at work on anything that will further the development of this state. His name endorsing any endeavor is assurance that it is worthwhile."

Patents Issued On Many Textile Items

A. D. Carter, president and treasurer of A. B. Carter, Inc., Gastonia, N. C., has been awarded two patents on knot structures to be used in tying parted ends in yarn, thread and the like, in textile operations such as weaving, winding and reeling. Each of these knots is so designed that when they are pulled tight, they will bind themselves in such a manner that they cannot become loosened and thereby allow the ends of the yarn or thread to separate when a strain is imparted to the yarn or thread in an operation such as a beat-up motion in a loom. Heretofore in the use of cotton and wool fibers, there was sufficient friction in the spun yarn to prevent slippage of a conventional knot, but these knots are especially adapted to be used in the tying of filament yarns such as nylon, since there does not exist sufficient friction in such filament yarns to prevent slippage of a conventional knot.

John H. Chapman of Central, S. C., and Bud A. Hagler of Charlotte, N. C., obtained patents on two devices relating to textile manufacturing, according to Paul B. Eaton, Charlotte attorney.

Mr. Chapman obtained a patent on a thin place detector for looms which is pivotally mounted below the cloth and has a point pressing upwardly against the lower surface of the cloth, and which point is pointed toward the front of the loom. When a thin place occurs in the cloth, the point will move up through the cloth, allowing a metallic tail associated with the pointed member to drop down onto a contact to establish a circuit, stopping the loom. It is said that since the pointed member extends upwardly and forwardly, it will not tear the cloth in the event the stop motion mechanism should not operate, due to its upward and forward inclination.

Patent on a warp strumming apparatus was awarded to Mr. Hagler. The device is adapted to be associated with beamers in which there is mounted below the sheet of warp a plurality of oscillating arms, each of which has a pair of upwardly projecting resilient fingers similar to drop wires employed in the stop motion mechanism in a loom. Means are employed for oscillating these members so as to cause the resilient fingers to wipe across and below the sheet of warp to strum the warp and to shake the warp threads apart from each other.

Patent No. 2,438,968 has been granted to Theophilus A. Feild, Jr., Edward W. Rugeley and John L. Petrokubi, Charleston, W. Va., assignors to Carbide & Carbon Chemicals Corp., on a process for producing, from filaments of a vinyl resin, stretched yarns of excellent softness and high "loop-break" strength. The process consists of surface coating each of at least two associated freshly spun continuous filaments of the vinyl resin with finely divided particles of an inorganic compound. The coated filaments are thus formed into yarn, the latter being dried at a temperature below the softening point of the resin. These are subse-

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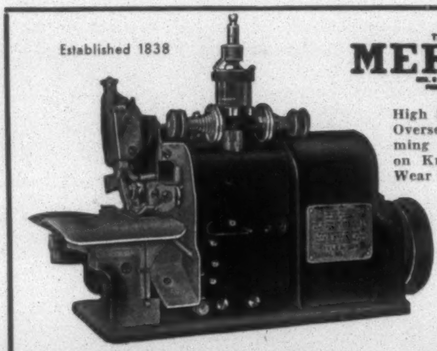

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quently stretched at least 100 per cent while subjected to steam at a temperature of from 100 to 160 degrees centigrade.

Another patent has been granted to Charles Franklin Miller of Wilmington, Del., assignor to E. I. du Pont de Nemours & Co., for a process of printing nylon fabric with a color from the group consisting of acid and direct dyestuffs. The improvement consists of applying the color by the aid of a printing paste containing caprolactam and an ammonium salt selected from the group consisting of the neutral and acid ammonium salts of sulfuric, phosphoric and pyrophosphoric acids. Listed as Patent No. 2,439,745, eight claims are covered.

Other patentees include Pieter H. Van Scherpenzeel, West Asheville, N. C., on vacuum drying packages of yarn including rotating packages; Alven N. Ayers, Asheville, N. C., on a picker stick strap lug; William V. Henry, Candler, N. C., on a device for use in the manufacture of synthetic threads; A. J. L. Moritz, Enka, N. C., on a tread advancing reel; Howard Snow and E. A. Gulledge, Charlotte, N. C., on a woven fabric; Howard Snow, Charlotte, on a method of manufacturing impregnated flexible fabrics; and Conrad J. Arlington, Winnsboro, S. C., on a knot or slub catcher.

School Holds Textile Institute For Public

The North Carolina Vocational Textile School, Belmont, conducted a textile institute for the public April 21-22. "Mill Maintenance," with particular emphasis on fundamentals of electricity and fire prevention was discussed by a panel of representatives from Westinghouse Electrical Corp., Duke Power Co., Factory Mutual Fire Insurance Co., and Factory Insurance Association.

Union Members Attack Mill Officials

Three officials of Hadley Peoples Mfg. Co., Siler City, N. C., recently were attacked by five C. I. O. members at the bus station in Siler City. The affray developed as follows: C. F. Sheppard, production manager of the plant, went to the Siler City bus station to meet a friend, and while waiting was threatened by the five C. I. O. members—G. W. Shuskey, William Siler, Weldon Andrews, Clyde Morris and J. W. Lopossay. Mr. Sheppard telephoned President Mason P. Thomas and Superintendent J. W. Inscoe and when they arrived a fist-fight occurred and later all eight were arrested and each placed under $500 bond.

Thomas and Sheppard received treatment at a physician's office for minor injuries. Lopossay sustained a head injury which required six stitches.

Mr. Sheppard did not know that the C. I. O. representatives were at the bus station when he went there to meet a friend and the trouble was brought on by the threats made

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against him, it is reported. There had been a strike at Hadley Peoples Mfg. Co. for about two weeks but one full shift was operating.

Rayon Plant Reported Offered For Sale

Reports in trade circles state that the U. S. Rayon Corp. cuprammonium rayon yarn plant at Danielson, Conn., recently acquired by a newly formed company, Cupranium Mills, Inc., is again being offered for sale. U. S. Rayon Corp. was formed to produce yarn by a continuous process developed by William Furness. This machinery was first located in Gloucester, N. J., where financial difficulties caused several re-organizations. It was moved to Danielson when the New Jersey location was required by the New York Shipbuilding Corp. When Cupranium Mills was formed, the officers were: Jack Price, president; Jack Perlstein of Perlstein & Diamond, vice-president; John Kenzer of Ken Coats, secretary; and Richard Green of Green Associates, of Canada, treasurer.

School Offers Course In Cotton Classing

The School of Textiles of North Carolina State College, Raleigh, will conduct a short course in cotton classing June 14-July 2. The short course is designed to give intensive instruction in the grading and stapling of cotton; an intimate knowledge of government standards; and a broad view of the subject of cotton quality. It will be of value to young men who wish to expand their knowledge of modern mill practices with respect to the selection of cotton for specific uses, and also for experienced classers who desire a refresher course in the broader aspects of the subject.

The course will be supervised by Joe E. Trowbridge, chief cotton classer for the State of North Carolina, who has had many years experience in this field. Supplementing the instruction of Mr. Trowbridge, members of the teaching staff of the School of Textiles at North Carolina State College will lecture to the class, and demonstrations will be given employing full-scale modern textile machinery as well as the finest testing laboratory equipment available.

Offer Refresher Course In Textiles

The annual refresher course in textiles and testing techniques offered by the United States Testing Co. will be held July 12-30, the company reports. Special emphasis will be given this year to various processes of finishing and dyeing fabrics. The regular classes cover all phases of the textile industry.

James Giblin, head of the textile design department of the New Bedford Textile Institute, will be in charge of the classes which will be open to teachers in home economics, graduate students of textile schools, retail executives, personnel directors and members of other allied professions.

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Worth Street Witnesses Quiet Period

In New York City's Worth Street market during the week of April 12, selling of cotton textiles slowed down after mills raised prices on forward goods. The increase came after a good business in print cloths the previous week and had the effect of discouraging buyer interest. Buyers also were bidding one-half to one cent a yard under asking prices on nearby print cloths with indications further weakness will develop on prompt goods.

Other sections of the market were largely quiet except for fair interest in drills for the third quarter. Rising raw cotton prices and the possibility of increased military buying inclined mills towards a firm attitude on the market.

Buyers, on the other hand, appeared to feel consumer demands are rapidly being met and that a falling off in textile exports would mean larger domestic supplies later in the year.

Although a fair inquiry for third and fourth quarter is reported, buyers are still shying away from mill prices. Most users realize they will have to buy goods eventually, but with the slack season close at hand, they seem content to wait for the market to settle. A good many inquiries now being received are said to be inquiries from jobbers and converters attempting to check first hand prices for an idea of what to ask in the second hand market.

Little hope is seen for alleviation of the serious long-staple cotton shortage in the near future and, should the shortage continue, mills may be forced to use a heavier number filling yarn in making lawns, thus producing goods of heavier weight. Market men feel that mills would prefer to continue operating in this manner rather than to curtail production or go off fine goods entirely.

The fine goods market remained dormant as both producers and buyers continued to mark time. There was very little interest in future contracts, and while prices have not softened further, market men await the third quarter prices of one large producer with interest, since such quotations may indicate what direction the market will take.

Fiber Labeling Bills Being Studied

Two bills, patterned after the Wool Labeling Act, are currently being discussed in Washington. Sen. Lister Hill (D., Ala.) stated recently that he would seek an early hearing before the Senate Interstate Commerce Committee on his new cotton products labeling bill (S.2492). This bill provides that a cotton product shall be misbranded, and therefore unlawful, if it is falsely or deceptively stamped, tagged, labeled or otherwise identified. Misbranding also would be present if the label did not show the cotton content of a product containing this fiber. Where a product is a blend of cotton and wool, the label would have to tell a purchaser the percentages of cotton, wool, reprocessed

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wool, reused wool and other fibers providing the total weight of each fiber represents five per cent or more of the total weight.

Another bill introduced in the Senate for consideration is (S.2383) calling for mandatory labeling of manufactured fiber products. In general, this bill required any person or company introducing a fiber product into commerce, or manufacturing it for introduction into commerce to affix to the product a stamp, tag or label showing: (a) The constituent fibers in the product, listed in the order of their predominence in weight and designated by generic names approved by the commission, but any fiber which accounts for less than ten per cent of the weight of the product may be designated as an "other" fiber; (b) the maximum percentage of the total weight of the product of any nonfibrous, loading, filling or adulterating matter, or; (c) the name or other identification issued by the Federal Trade Commission of the manufacturer of the product.

Section 7 of the Alabama Senator's bill (S.2492) provides for condemnation of improperly labeled cotton products, while Section 9 carries the "guaranty" that no person shall be found guilty of misbranding if he can produce a compliance certificate showing the name of a company from which the product was obtained. A similar guaranty clause is included in S.2383.

Cotton Consumption Up In March

The Census Bureau has reported that lint cotton consumed during March totaled 878,714 bales, compared with 785,231 during February of this year and 875,306 during March of last year. Consumption for the eight months ended March 31 totaled 6,301,316 bales of lint, compared with 6,928,094 for the corresponding period a year previously.

Cotton on hand March 31 included: in consuming establishments, 2,286,114 bales of lint compared with 2,234,321 a year ago; in public storage and at compresses, 3,676,735 against 3,339,213 a year ago.

Cotton spindles active during March numbered 21,708,000 compared with 21,489,000 during February this year, and 21,959,000 during March last year.

Cotton consumed during March included: in cotton-growing states, 774,577 bales, compared with 693,571 in February this year, and 767,341 in March of last year, and for the eight-month period, 5,555,507 bales compared with 6,069,037 in the corresponding period a year ago; in the New England states, 83,270 bales, compared with 73,273 and 85,255; and for the eight-month period, 598,660 bales compared with 662,134.

Cotton on hand March 31 included: in consuming estab-

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lishments, in cotton-growing states, 1,894,671 bales, compared with 2,234,321 a year ago, and in the New England states, 328,939 bales, compared with 265,721; in public storage and at compresses, in cotton-growing states, 3,606,929 bales, compared with 3,280,521 a year ago, and in the New England states, 54,974 bales, compared with 42,578 a year ago.

Cotton spindles active during March included: in cotton-growing states, 17,094,000 compared with 17,036,000 for February this year, and 17,016,000 for March last year; and in the New England states, 4,816,000 compared with 4,029,000 and 4,390,000.

Crop Grade Higher, But Staple Shorter

The grade of the 1947 cotton crop was the highest since 1939 and considerably higher than that of the small 1946 crop. However, the staple length averaged somewhat shorter than the 1946 crop, according to a report released by the U. S. Department of Agriculture.

The grade index of the 1947 crop is estimated to be 96.9 (Middling White equals 100) as compared with 94.6 for the 1946 crop. The grade was higher in all the major cotton producing states with the exception of North Carolina and South Carolina; the greatest improvement occurred in the Mississippi Valley area, in Texas, Oklahoma and California.

The average staple length of cotton produced in 1947 was shorter than in 1946 in every state except Georgia and California. The sharpest reductions in average staple length were in North Carolina, Arkansas, Mississippi and Texas.

Compared with 1946, the 1947 cotton crop contained larger proportions of cotton grading Middling and higher, larger proportions of 13/16ths and shorter, and more cotton of lengths 31/32nds through 1 1/32nd. The supply of cotton of 1 1/16 and longer is considerably less than for the previous season. The sharply wider premiums for these longer staple lengths that have been paid during recent months, probably reflect this shorter supply.

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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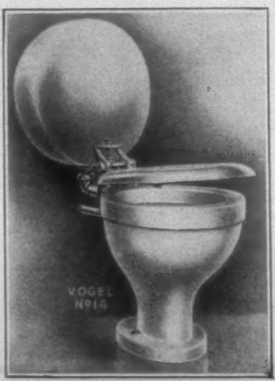

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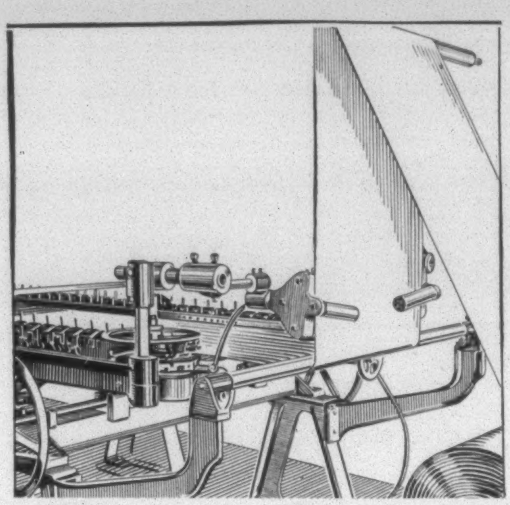

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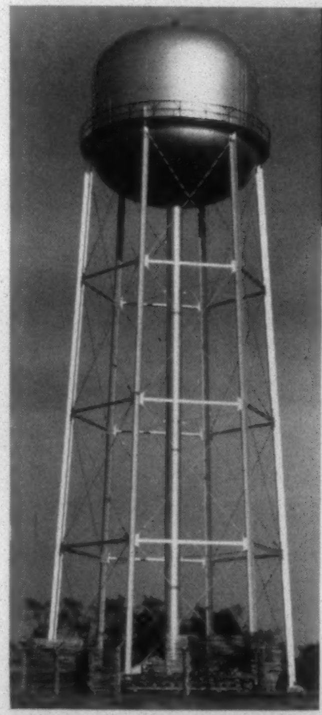

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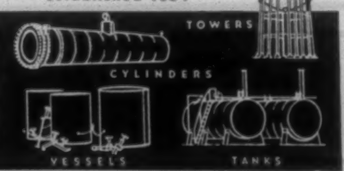

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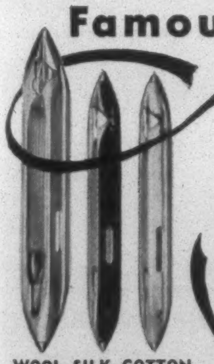

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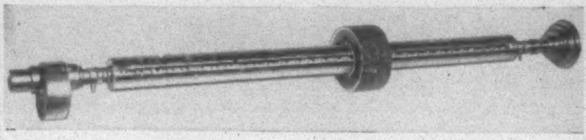

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WANTED—Position as Overseer Spinning (diploma); 16 years on last job; references. Would very much prefer Southeastern states. Write "C. C. E.," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Before Closing Down

— TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED —

S. T. A. CONVENTION

Partial program notes for the annual convention of the Southern Textile Association at Myrtle Beach, S. C., May 13-15, have been announced by Virgil E. McDowell of Roanoke Rapids, N. C., president of the organization.

A social hour, with the Associate Members Division as host, will begin the convention late Thursday afternoon, May 13; this will be followed by the usual Associate Members Division banquet. Business sessions are scheduled for the mornings of May 14 and 15. The annual golf tournament and other recreational activities are scheduled Friday afternoon, May 14, with the main S. T. A. banquet that night. The Associate Members Division has arranged to furnish musical entertainment following each banquet, as well as golf tournament prizes. The association itself will provide favors for each lady attending its banquet Friday night.

This year identification badges will be furnished to each person who registers. A $3 registration fee will be charged by the association in order to defray various convention expenses such as badges, prizes and tips; there will be no fee for ladies. The association also has requested each person, whether representing a mill or supply firm, to show his S. T. A. membership card or be prepared to join the organization as a regular member ($2 annual dues) or associate member ($3 annual dues).

The Ocean Forest Hotel this year is operating on the American plan, and requests for reservations should be made direct to Ralph J. Hewlett, general manager.

S. T. A. PIEDMONT MEETING

The program for the Spring meeting of the Southern Textile Association's Piedmont Division has been announced by Marshall H. Rhyne of Stanley, N. C., chairman. E. J. Eaddy of the Textile Shop, Spartanburg, S. C., will discuss "Electric Drives and Moisture Content Control on Slashing Equipment," and Prof. John F. Bogdan of the North Carolina State College School of Textiles will present a paper on "Predetermining the Spinning Characteristics of Cotton."

The meeting will be held May 1 at 11 a. m. in the Charlotte Hotel, Charlotte, N. C. The Piedmont Division, recently reactivated, now embraces the old S. T. A. Gaston County Division.

FIBER OUTLOOK

The trend toward lighter-weight clothing and increasing competition from synthetic fibers may result in a gradual decline in wool consumption for apparel during the next decade, the Bureau of Agricultural Ecenomics has reported in a special study on long-range prospects for American agriculture.

"Even under rather favorable conditions of employment and income, per capita consumption of wool is expected to be less than in 1947, but perhaps 20 to 30 per cent above the pre-war level," said the B. A. E. survey. "If conditions are less favorable, it may drop to around the 1935-1939 level, which was also the level of 1925-1929. Under either set of conditions, the rate of consumption may show a gradual down trend because of increasing competition from synthetics and the tendency toward lighter clothing."

While production of synthetic fibers, competitors to both cotton and wool, is likely to increase, B. A. E. observed that "production of materials that combine wool with synthetics may exert a stabilizing influence" on wool consumption.

As for cotton, the report emphasized that much of cotton's future depended upon the foreign situation. "Until the middle 1930s," it was noted, "American cotton was predominantly an export commodity in the sense that exports were larger than domestic consumption. Beginning with 1934-1935, however, growing domestic consumption exceeded declining exports. During and since the war, the discrepancy between the two has become very large. In 1947, domestic consumption was about 9½ million bales, while exports totaled less than three million bales."

Per capita consumption of cotton in the United States averaged about 26 pounds per year from 1910 to 1939. In the meantime consumption of synthetic fibers rose rapidly. Cotton, said B. A. E., now accounts for only about 75 per cent of all textile fibers consumed in this country as compared with more than 85 per cent in the 1920s.

"But cotton consumption increased sharply during and following World War II," the report continued, "and the recent and widespread interest in finding and developing new uses and better ways of using cotton is a strengthening factor.

"As a result, with high level employment, it appears that per capita consumption of cotton might be held reasonably close to the 1947 level, even if the average per capita consumption of synthetitc fibers should continue to increase. If intermediate conditions of employment should prevail (B. A. E. uses an average of eight million unemployed in any one year to define 'intermediate conditions'), the per capita consumption of cotton might be considerably less than in 1947 and perhaps about equal the average pre-war level."

MILL NEWS

Mt. Holly, N. C.—Operating results in the form of unaudited figures, released by officials of American Yarn & Processing Co., show consolidated profits of $1,041,763.22 for the quarter ended April 4. After accruing $439,292.42 for federal and state income taxes, there was a net profit of $602,470.80 after allowance for preferred dividends. This is equal to $1.47 per share of outstanding common stock. These figures do not reflect the corporation's interests in Efird Mfg. Co., which are added at the end of the year to the extent of the American's prorated ownership in the Albemarle, N. C., company.

Cleveland, Ohio — Industrial Rayon Corp. has reported first quarter net income of $2,907,877, equal to $1.91 per share of common stock. This compares with $1.70 per share for the first quarter of 1947.

Gaffney, S. C.—Gaffney Mfg. Co. honored 47 employees with service records ranging from five to 50 years at a dinner April 16. This second annual such gathering featured addresses, string music and a turkey dinner.

Greenville, S. C.—Haynesworth Mill has increased its capital stock from $10,000 to $710,000, according to records filed at the state capital in Columbia.

Greensboro, N. C.—Burlington Mills Corp. is beginning construction on a 30,000 square foot annex to its quality control and testing laboratories on Arlington Street here. The one-story addition, of brick and steel, will be built by H. L. Coble Construction Co.; the architectural firm of McMinn and Norfleet planned the annex. After completion of the project next Fall the firm will move its sample department from Burlington, N. C., to the new structure. Twenty persons and a number of looms will be affected by the transfer.

Greenville, S. C. — Stockholders of Woodside Cotton Mills Co. at a special meeting April 16 approved a plan for reorganization of the firm providing that: Easley Cotton Mills (plants at Easley and Liberty, S. C.), a wholly-owned subsidiary, be dissolved and its assets distributed in liquidation to the company; name of the company be changed to Woodside Mills, and authorized capital be increased from $2,950,000 to $4,000,000 divided into 400,000 shares of $10 par value; outstanding stock be split two-for-one as a result of the decrease in the par value of each share; a 100 per cent stock division be declared so that each share of $20 par stock now outstanding would be exchanged for four shares of new $10 par stock. The stock dividend will be payable May 1.

Charlotte, N. C.—Operations will be begun within 30 days at the Marshall Mfg. Co. plant being established in the old War Assets Administration warehouse at Drum and Berryhill Streets here. The plant will employ about 300 persons in the manufacture of tobacco cloth. The firm is owned by

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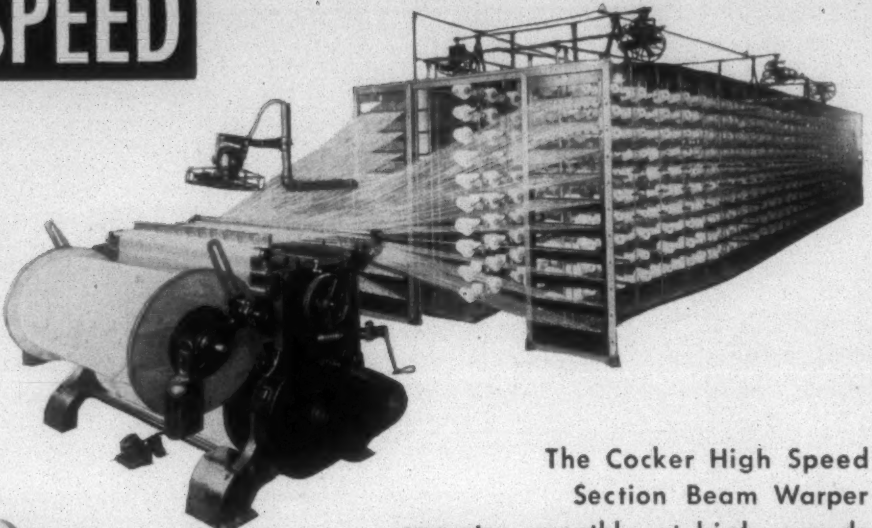

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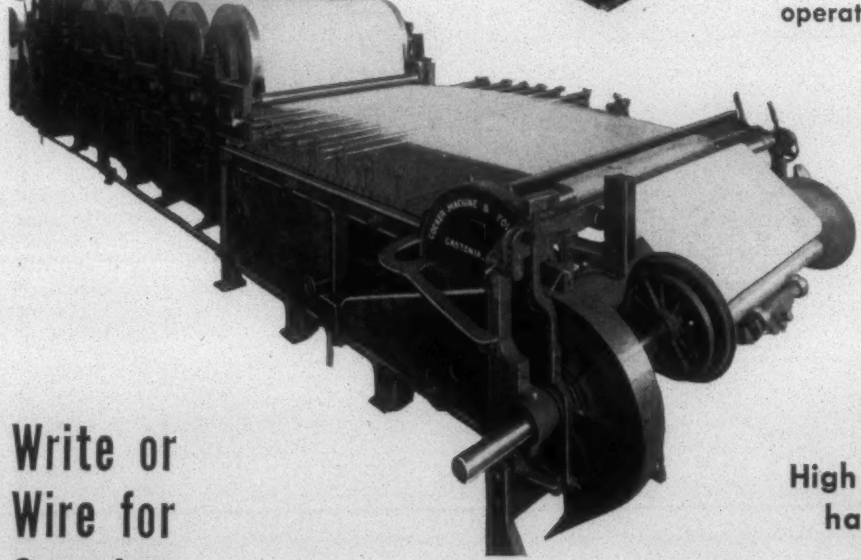

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BEFORE CLOSING DOWN

Leading Embroidery Co. of North Bergen, N. J. Leon Salkind, president, has announced plans for moving to Charlotte from North Bergen within the next few months. Calvine Cotton Mills, Co., another Leading subsidiary, is currently undergoing an expansion program which will increase employment from 300 to 350 persons. The old Calvine Mill village of 29 houses has been purchased by Leading from a real estate firm.

GOLDVILLE, S. C.—Joanna Cotton Mills Co. has distributed $217,000 in wage dividends to 1,250 employees, an increase of 52 per cent over the bonus last year. The checks averaged $175 per person, with each employee eligible for a full bonus receiving 9.1 per cent of his yearly earnings. Joanna has paid nearly a million dollars in wage dividends during the past ten years.

NASHVILLE, TENN. — Four textile firms with an estimated minimum investment of $500,000 are seeking locations in this section, it is made known by the Industrial Development Division of the Tennessee Planning Commission. These companies, described as nationally-known and well-financed, will consider locations in towns capable of furnishing plant space on a long-term lease, it was stated. Buildings of 100,000 to 250,000 square feet are required, and three of these textile projects will need large-volume water supplies.

PERSONALS

H. R. Lane was elected president of the Kendall Co. at the company's annual meeting in Boston, Mass., April 16. He succeeds Henry P. Kendall, who becomes chairman of the board. L. H. Ballou was elected vice-chairman of the board and Richard R. Higgins was chosen treasurer. Mr. Higgins and Theodore Clark, vice-president, were added to the board.

Ashby L. Baker has been named president of Virginia Mills, Inc., Swepsonville, N. C., succeeding the late Mrs. Minnie F. Baker, who died recently after serving several years as head of the company and chairman of its board. Other officers named at a reorganization meeting include: Julian T. Baker, vice-president and re-elected treasurer; A. D. Williams, re-elected secretary, and Walter M. Williams, named chairman of the board and re-elected executive vice-president.

OBITUARIES

William Beach Olmsted, Jr., 54, vice-president in charge of sales and a director of American Viscose Corp., died suddenly April 15 at his home in New York City. He joined American Viscose in 1930 and was made vice-president in 1946. He is survived by his wife, his mother, a sister and a brother.

William E. Parker, 63, retired overseer of carding at Linford Mills, Inc., Belmont, N. C., died April 17. He is survived by his widow, two sons, two daughters, nine grandchildren, a brother and two sisters.

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